RADview-PC/TDM

Network Management System for TDM Applications

Megaplex-2100/2104

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Chapter 1

Edit Configuration Mode

This section describes the Megaplex management operations that can be performed in RADview's Edit Configuration mode.

1.1 Connecting RADview Management Station to TDM

The RADview management station may be connected to Megaplex units in one of the following setups:

- Direct management-to-TDM link running on Single Line Internet Protocol (SLIP)
- Connection from management station in a LAN through an MBE to a TDM unit.

Direct Management Connection

In this application, the management station is connected directly to a Megaplex unit. If more than one device is installed on this network, the device directly connected to management is the *local* unit. Any other devices are *remote*.

This application requires installation of SLIP. It is the customer's responsibility to acquire a SLIP communication program and to install it according to the manufacturer's instructions. RADview supports both public domain SLIP and vendor SLIP.

Figure 1-1 shows a sample direct management application.

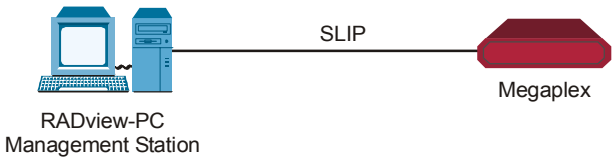


Figure 1-1. Direct Management Application

Management via LAN

In this application, the management station is connected to the device through an Ethernet LAN and an MBE (Ethernet Elementary Bridge). If the MBE and the device are located in the same subnet, the system will operate immediately upon hardware connection with no need for further software configuration.

Figure 1-2 and *Figure 1-3* show a sample management via LAN application.

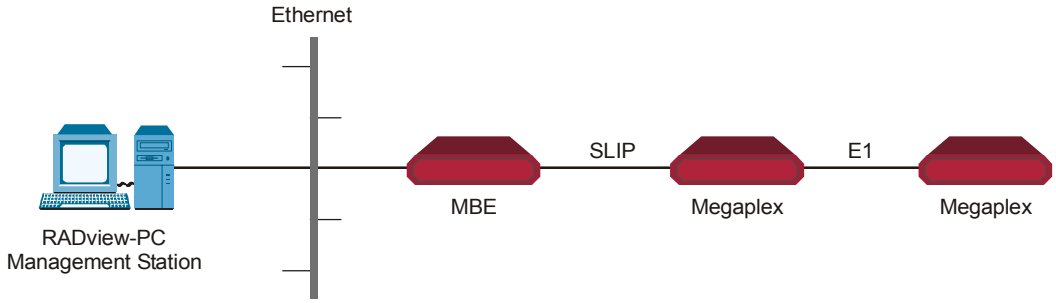


Figure 1-2. Megaplex Management via LAN

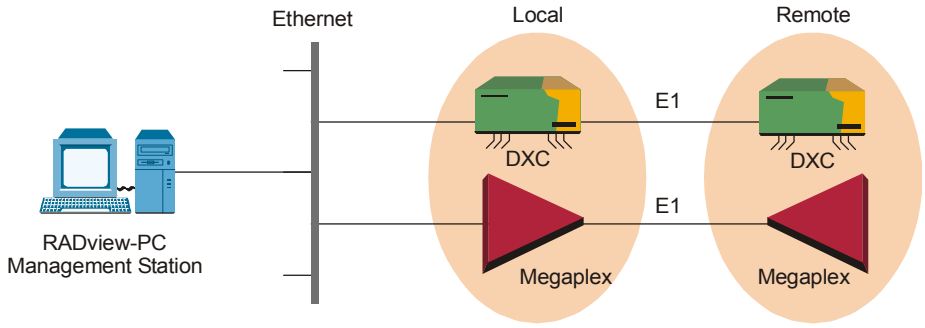


Figure 1-3. Megaplex or DXC Management via LAN

1.2 Preliminary Hardware Configuration

Basic Configuration Tasks (for the MP2100/2104)

Preliminary hardware configuration for the MP2100/2104 is performed using a Terminal Emulation program.

When selecting parameters, click the <**F**> and <**B**> keys to move forward and backwards among the possible values for the selected parameter. Click <**Enter**> to make a selection and the spacebar to move on to the next parameter.

➤ **To initiate terminal operation with the MP2100/2104:**

1. With the PS and CL cards in place, switch unit to **ON**.
2. On the active CL card, set the DIP/pin adjacent to the alarm LED to **ON**.
3. Double-click the Terminal's icon.

4. Select the correct COM port, and then from the **Setting** menu select **Communication.**
5. Enter the following Communication Parameters, and then click <**OK**>:
   - Baud Rate: **9600**
   - Data Bits: **8**
   - Stop Bits: **1**
   - Parity: **None**
   - Flow Control: **None**

Note *At the beginning of terminal emulation, and after specified time-out periods, you will be prompted to type the password. The default password is ENTER.*

6. From the **Setting** menu select **Modem Communications**.
7. Change the setting in the **Modem Defaults** field to **None**, then click <**OK**>**.**
8. Enter the terminal definition in the field provided. For example, for VT-100, type **DEF TERM VT-100**, and then click <**Enter**>.

➤ **To define agent parameters:**

1. Type **def agent** and click <**Enter**>.
2. Enter appropriate values for the following in the fields provided:
   - MUX name: **MP2100**
   - IP address: **(999.999.999.999)**
   - Net Id: **1** to **255**
   - SNMP Read Community: (up to 8 characters):**public**
   - SNMP Write Community: (up to 8 characters):**private** (for WAN)
   - SNMP Trap Community: (up to 8 characters):**public**

➤ **To define serial port parameters:**

1. Type **def sp**, then click <**Enter**>.
   The default parameters will be displayed.
2. Set the baud rate, data bits, and stop bits to correspond to the SLIP, by entering values that correspond to the Communication Parameters entered for the Megaplex.
3. Set the auxiliary device to **SLIP NMS**, and then click <**Enter**>.

➤ **To update the database:**

- Type **db upd** and a number between **1** and **10**, and then click <**Enter**>.

➤ **To complete the configuration:**

1. Type **bye** and click <**Enter**>.
   The Terminal configuration window closes.
2. Close the Terminal Screen's icon.

3. On the active CL card, set the DIP/pin adjacent to the alarm LED to **OFF**.

1.3 System Level Configuration Operations

The Edit Configuration mode allows you to program and save up to 10 configurations for the current Megaplex, its cards and its ports. Up to 10 configurations can be stored in the RADview database and the CL (common logic) cards of the Megaplex. The system can be programmed to switch automatically between them in accordance with a predetermined daily schedule (day/night operation), or to use one of the databases when it is required to switch to a backup line.

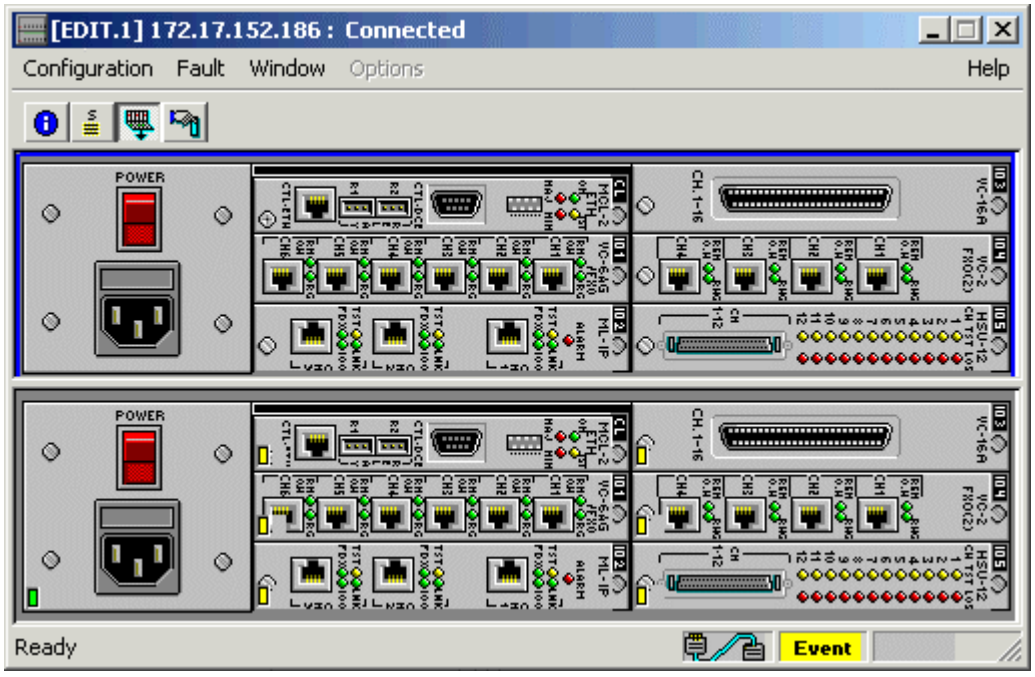


Figure 1-4. Megaplex System Level – Edit Configuration Mode

➤ **To select the Edit Configuration mode:**

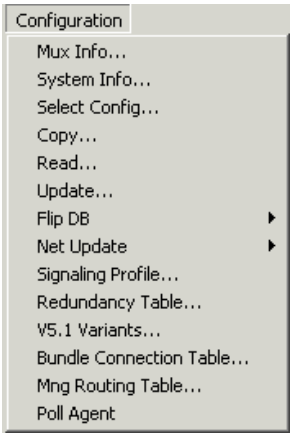
- In the Megaplex View, click the border of the top hub in the window.

Note ***Zooming into the MP–2100/4 for the First Time***

After RADview–HPOV Installation has completed, the first time you zoom into a MP–2100/2104, the system processes the agent's alarms descriptions. This process may last for 3 minutes, without any indication that it is running.
Do not perform "Read" or "Update" operations during this period of time, as it may lead to receiving an "Unknown Error/Alarms" description for some of the alarms.

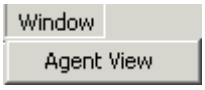
Table 1-1 lists the different management options for the system level.

Table 1-1. System Management Options



Tasks – Configuration	Dialog Box and Parameter Location	Path
Setting Mux timing information	Mux Information dialog box (*Figure 1-5*)	Configuration ➥Mux Info…
Displaying system information Setting voice level offset	System Information dialog box (*Figure 1-6*)	Configuration ➥System Info…
Setting Mexaplex configuration	Select Configuration dialog box (*Figure 1-7*)	Configuration ➥Select Config…
Copying edit configuration to another Mux	Mux Copy dialog box (*Figure 1-8*)	Configuration ➥Copy…
Transferring current agent configuration to edit configuration	Read Config dialog box (*Figure 1-9*)	Configuration ➥Read…
Transferring edit configuration to agent configuration	Update Config dialog box (*Figure 1-10*)	Configuration ➥Update…
Setting flip DB agenda	Flip DB Agenda dialog box (*Setting the Flip DB Agenda*)	Configuration ➥Flip DB ➥Agenda…
Setting flip DB net events	Flip DB Net Events dialog box (*Figure 1-13*)	Configuration ➥Flip DB ➥Net Events…
Defining events that cause RADview to flip to specific configuration	Flip DB Decision table (*Figure 1-15*)	Configuration ➥Flip DB ➥Decision Table…
Saving (downloading) edit flip configuration parameters to agent	See *Updating (downloading) the Flip DB to the Megaplex*	Configuration ➥Flip DB ➥Update…
Reading (uploading) flip parameters from agent to edit flip configuration	See *Reading (Uploading) the Flip DB to the Edit Configuration*	Configuration ➥Flip DB ➥Read…
Saving current edit configuration to all Muxes in net	Net Update Save Configuration dialog box (*Figure 1-19*)	Configuration ➥Net Update ➥Save Config…
Saving current flip configuration to all Muxes in net	See *Saving the Flip DB*	Configuration ➥Net Update ➥Flip DB…

Configuring system signaling profiles	Signaling Profile dialog box (*Figure 1-21*)	Configuration ➥Select Profile… ➥ [Signaling Profile…]
Configuring Bundle Parameters	Bundle Connection Table (*Figure 1-36*)	Configuration ➥Bundle Connection Table…
Manage Routing Table	Managers Routing Table (*Figure 1-39*)	Configuration ➥Mng Routing Table…
Setting redundancy parameters	Redundancy Table (*Figure 1-35*)	Configuration ➥Redundancy Table…
Setting V5.1 Variants	V5.1 Variants dialog box (*Figure 1-26*)	Configuration ➥V5.1 Variants
Polling the agent	See *Polling the Agent*	Configuration ➥Poll Agent
Tasks – Fault	**Dialog Box and Parameter Location**	**Path**
Viewing list of errors from last sanity check	Sanity Check Errors List (*Figure 1-42*)	Fault ➥Sanity Check Errors…
Tasks – Window	**Dialog Box and Parameter Location**	**Path**
Displaying Agent view	See *Displaying the Agent View*	Window ➥Agent View ➥On



Performing Megaplex Software Configuration

The **Mux Info** command allows you to view and set Megaplex configuration information.

➤ **To set the current Megaplex software configuration:**

- From the **Configuration** menu, select **Mux Info** …

  The Mux Information dialog box appears.

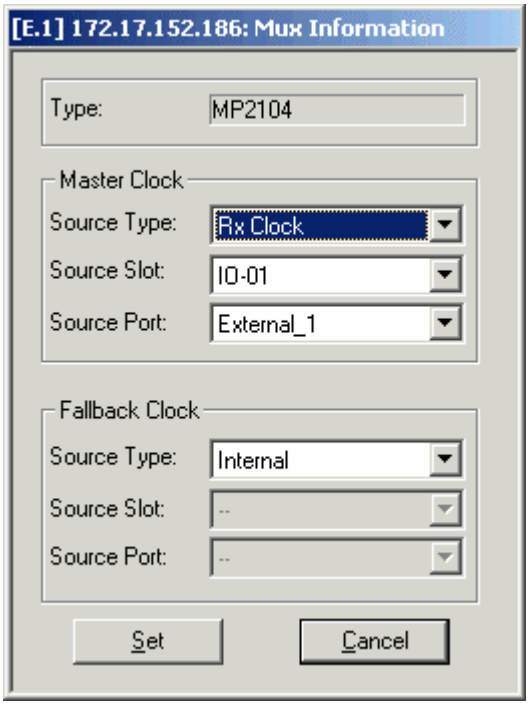


Figure 1-5. Mux Information Dialog Box

Table 1-2. Mux Information Parameters

Parameter	Possible Values / Remarks
Type	The type of Megaplex **MP-2100**, **MP-2104**
Master Clock	
Type	Main source for Megaplex timing **Internal, Rx Clock, Adaptive** ***Note***: Adaptive is available only when an ML-IP card exists in the hub
Slot	The slot containing the card on which the master clock is located. This parameter is applicable only when the master clock source type is Rx Clock. Empty slots are not selectable. **IO-1..IO-12** For MP-2104: **IO-1**..**IO-5**.
Port	The port through which the master clock signal is received by the Megaplex. **external-1**..**external-12** For an HS-Q/M card, only **external-1** is available When Type is Adaptive: **Bundle1..Bundle120** ***Note***: To avoid future sanity check errors, select only existing bundles, or one that is going to be created
Fallback Clock	
Type	Alternate source for the Megaplex timing, to be used in case the master clock fails **Internal, Rx Clock, Adaptive** ***Note***: Adaptive is available only when an ML-IP card exists in the hub

Parameter	Possible Values / Remarks
Slot	The slot containing the card on which the fallback clock is located. This parameter is enabled only when the fallback clock source type is Rx Clock. Empty slots are not selectable **IO-1..IO-12** For MP-2104: **IO-1..IO-5**.
Port	The port through which the fallback clock signal is received by the Megaplex. **external-1..external-12** For an HS-Q/M card, only **external-1** is available When Type is Adaptive: **Bundle1..Bundle120** ***Note***: To avoid future sanity check errors, select only existing bundles, or one that is going to be created

Displaying System Information

The **System Info** command displays physical information about the current Megaplex.

➤ **To display system information:**

1. From the **Configuration** menu, select **System Info...**

   The System Information dialog box appears.

2. Select value for **Voice Level Offset** (Offset 1 or No Offset) and click <**Set**>.

Note *Voice Level Offset is valid only for SW versions ≥6.30.*
The Voice Level Offset affects the displayed value of Tx and Rx levels (voice cards only) by adding or subtracting a constant value. The offset varies depending on the port.
The following values are added when Offset 1 is selected:
For 2WIRE PORTS:
Tx Level: The base value (for 0dBm) =0
Rx Level: The base value (for 0dBm) =–2
For 4WIRE PORTS:
Tx Level: The base value (for 0dBm) =–16
Rx Level: The base value (for 0dBm) =7

Figure 1-6. System Information Dialog Box

Modifying the Configuration List

➤ **To view the list of Megaplex configurations:**

- From the **Configuration** menu, select **Select Config…**

  The Select Config dialog box appears.

Note *A maximum number of 10 configurations can be stored.*

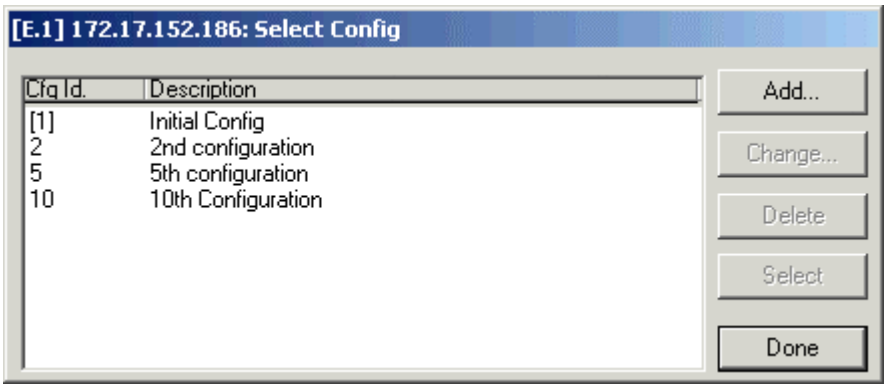


Figure 1-7. Select Configuration Dialog Box

Table 1-3. Select Configuration Parameters

Parameter	Possible Values / Remarks
Cfg Id	Index numbers in the list of the configurations. The current Edit Configuration is marked by [ ] surrounding the Cfg Id number. RADview can store up to 10 configurations.
Description	Brief description of each configuration ID. The default description for Cfg Id [1] is **Initial Config**.
[Add…]	Click <**Add…**> to add a new Megaplex configuration to the Select Config list. The Add Configuration dialog box appears. Select an available configuration ID and enter a description of the new configuration in the Description field. Click <**OK**>**.** The new configuration will include the same set of cards as the previous configurations, although those card configuration values will be the defaults.
[Change…]	To change a Megaplex configuration description, select an entry in the list and click <**Change…**> The Change Configuration dialog box appears. Enter new description of the configuration in the Description field. Click <**OK**>**.** The changed description appears in the Select Config dialog box.
[Delete]	Delete an entry in the list by selecting it and clicking <**Delete**>. A dialog box appears asking the user to confirm the delete. Click <**OK**> to confirm delete from the RADview database. ***Note:*** *You cannot delete the configuration that currently appears in the Edit Configuration mode. To delete this configuration, select another configuration to appear in the Edit Configuration mode. You can then delete the replaced configuration.*
[Select…]	A configuration can be added to the Select Config list if less than 10 Megaplex configurations exist in RADview's database. To select a configuration to appear in the Edit Configuration mode: click the required configuration and click **Select…**

Copying Configuration

The **Copy** command transfers the current Edit Configuration, or all existing Edit Configurations, to a specified Megaplex in the net.

➤ **To copy configurations:**

1. From the **Configuration** menu, select **Copy..**.

   The Mux Copy dialog box appears.

Note *If all the configurations are selected, the Configuration ID and Description fields will be disabled. The copied configurations will have the same ID and Descriptions as the source.*
The destination Mux must have the same Running Application (matching Agent SW Version) as the Mux in focus, otherwise, it will not be selectable.

2. Set **Copy** parameters as required and click <**Set**>.

   If All configurations are selected to copy:
   The existing Edit configurations are copied to the destination Muxes with the same Configuration ID and Description.

If Current configuration is selected to copy:
NMS copies the current Edit Configuration to the Muxes and Configuration selected.

Note *If the cards in the copied configuration are different from the original cards in the destination Muxes, the new set of cards will be copied to the destination configuration. All the other existing configurations of the destination Mux will change their set of cards accordingly. Slots containing unchanged card types, will remain unchanged. Slots containing new card types, will contain default values.*
If the Configuration ID already exists in the destination Mux, the copied Configuration replaces the existing one.
If the Configuration ID does not exist in the destination Mux, NMS adds the new Configuration to the list of the existing configurations, with its attached description.
The Destination Mux, its Card Windows and all Dialog Boxes will close when the Copying operation is performed.
The Flip DB tables are not copied.

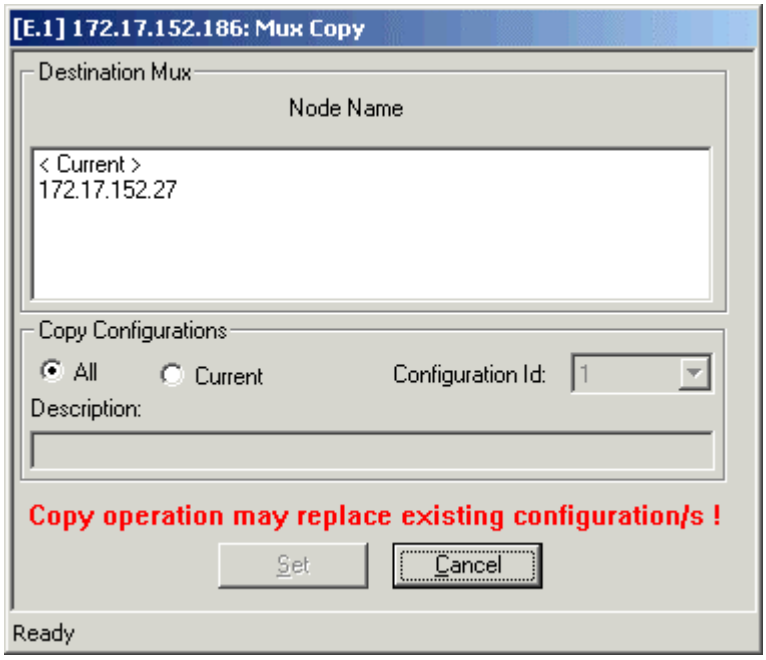


Figure 1-8. Mux Copy Dialog Box

Table 1-4. Mux Copy Parameters

Parameter	Possible Values / Remarks
Destination Mux	A list of the existing Megaplexes, including the current one. For MP2100 - only MP2100 Megaplex types will be selectable. For MP2104 - only MP2104 Megaplex types will be selectable. You can select more than one Megaplex as the destination. The Configuration ID is the same for all if only the present configuration is copied.
Copy Configurations	All existing Edit Configurations or only the Current Edit Configuration can be copied.

Configuration Id	The destination configuration ID. If the destination configuration ID exists, the copy operation will overwrite it. The default Configuration ID is the same as the current Edit Configuration. ***Note:*** *The current configuration cannot also be the destination configuration.*
Description	A brief description of the destination configuration.

Reading the Agent Configuration

The **Read** command uploads the current Agent configuration to the Edit Configuration mode. This command is only available when there is communication with the agent.

➤ **To upload the configuration from the agent:**

1. From the **Configuration** menu, select **Read...**.
   The Read Config dialog box appears (*Figure 1-9*).
2. Select the desired configuration by clicking on it.
3. Click <**Apply**>.

Note *Apply causes the selected configuration to be uploaded automatically. No user confirmation is requested.*

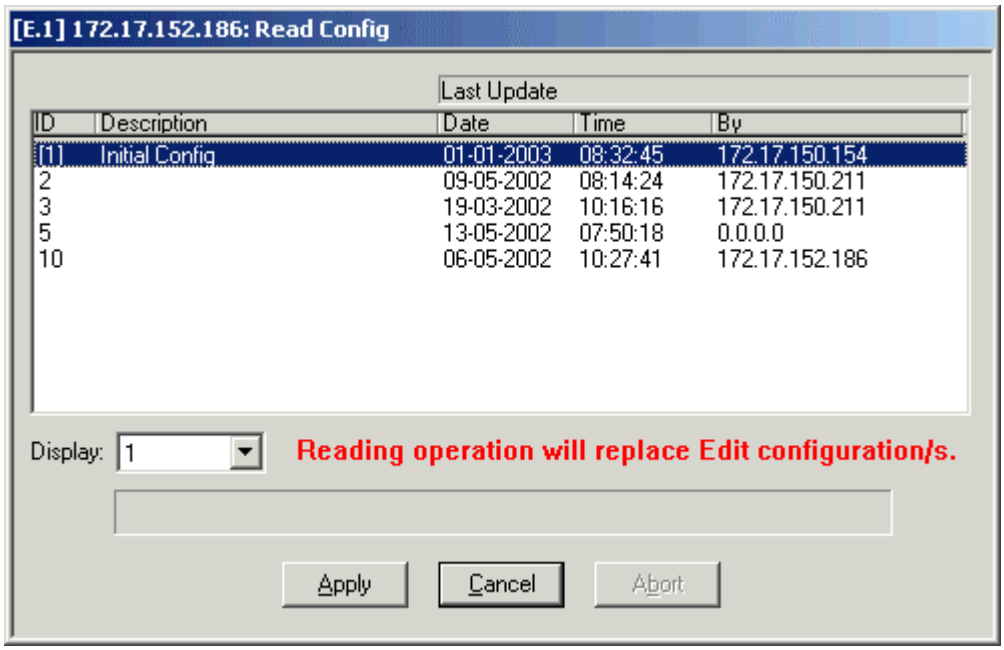


Figure 1-9. Read Config Dialog Box

Table 1-5. Read Configuration Parameters

Parameter	Possible Values / Remarks
ID	Configuration ID number of agent configuration in the RADview database. The current Agent Configuration is marked by [ ] surrounding the Cfg Id number.
Description	Brief description of each agent configuration in the RADview database

Date	Date of the last update of each configuration
Time	Time of the last update of each configuration
By	IP address of the manager that performed the last update of each configuration
Display	Selected configuration entry from the Read Config list

Updating the Configuration to the Agent

The **Update** command downloads a specific Edit Configuration to the Megaplex CL-2, or CL-2 ETH card.

➤ **To download a specific Edit Configuration to the agent:**

1. From the **Configuration** menu, select **Update**…
   The Update Config dialog box appears.
2. Select the desired **Configuration Id**.
3. Click <**Set**> to download the selected configuration to the Megaplex.

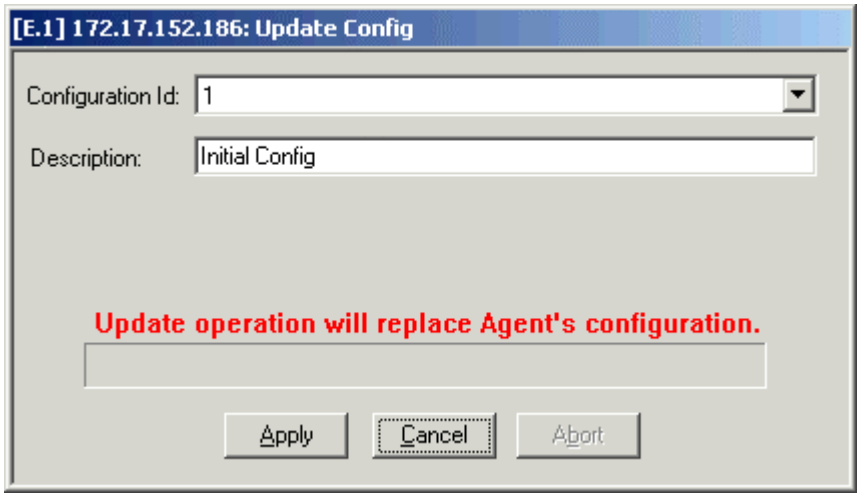


Figure 1-10. Update Config Dialog Box

Table 1-6. Update Config Parameters

Parameter	Possible Values / Remarks
Configuration ID	Configuration ID number of Edit Configuration that you want to download to the Megaplex
Description	Brief description of the selected Edit Configuration

Performing Flip DB

The **Flip DB** command opens a submenu that includes commands for defining parameters for flipping configurations, saving the Flip configuration to the Megaplex (activating), and reading the Flip configuration to the Edit Configuration (uploading).

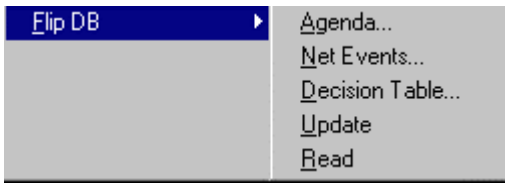


Figure 1-11. Flip DB Submenu

Setting the Flip DB Agenda

The **Agenda** command defines a type of workday for every day of the week. The type of workday helps determine the times of automatic activation for the Flip configuration.

➤ **To define a weekly agenda for the Flip configuration:**

1. From the **Configuration** menu, select **Flip DB** followed by **Agenda**…

   The Flip DB Agenda dialog box appears (*Figure 1-12*). The Flip DB Agenda dialog box displays a weekly schedule.

2. For each day of the week, click a Day Type. A Day Type can be **Full Workday**, **Partial Workday** or **Weekend**. Only one Day Type can be selected for each week day.

3. Click <**Set**> to save the agenda in the RADview Edit Configuration database.

Note *This agenda will be downloaded to the Megaplex only when you invoke the Flip DB>Update command.*

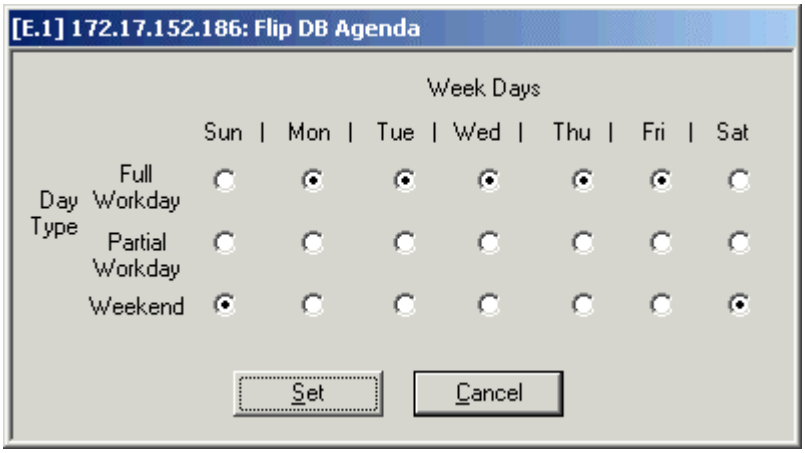


Figure 1-12. Flip DB Agenda Dialog Box

Setting Flip DB Net Events

The **Net Events** command defines the events that will occur during the automatic configuration flip.

➤ **To set the Net Events:**

1. From the **Configuration** menu, select **Flip DB** followed by **Net Events…**

   The Flip DB Net Events dialog box appears.

2. Configure desired parameters and click <**Set**> to save the Net Events parameters in the RADview Edit Configuration database.

Note *These parameters will be downloaded to the Megaplex only when you invoke the Flip DB>Update command.*

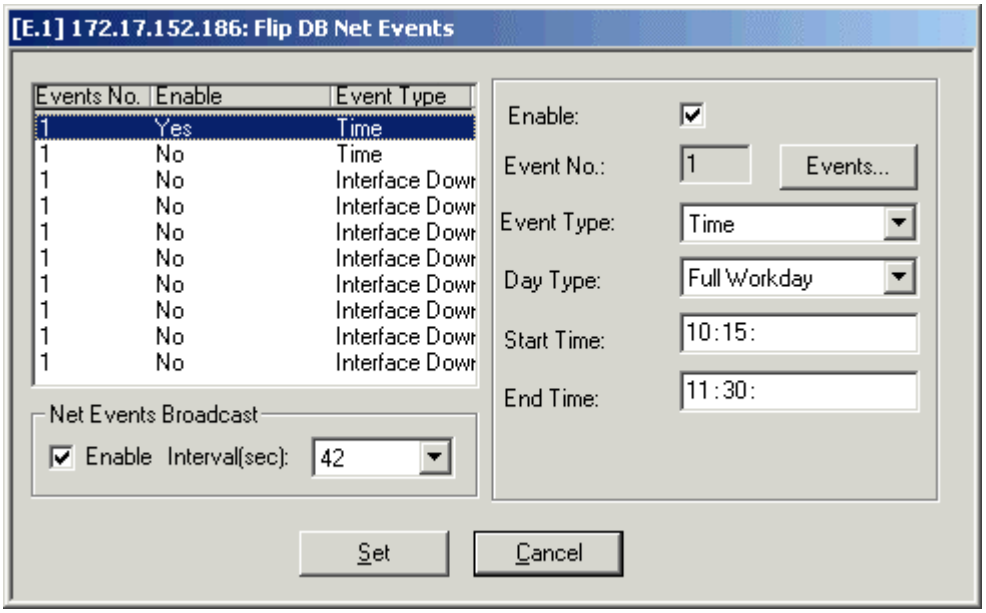


Figure 1-13. Flip DB Net Events Dialog Box Event Type = Time

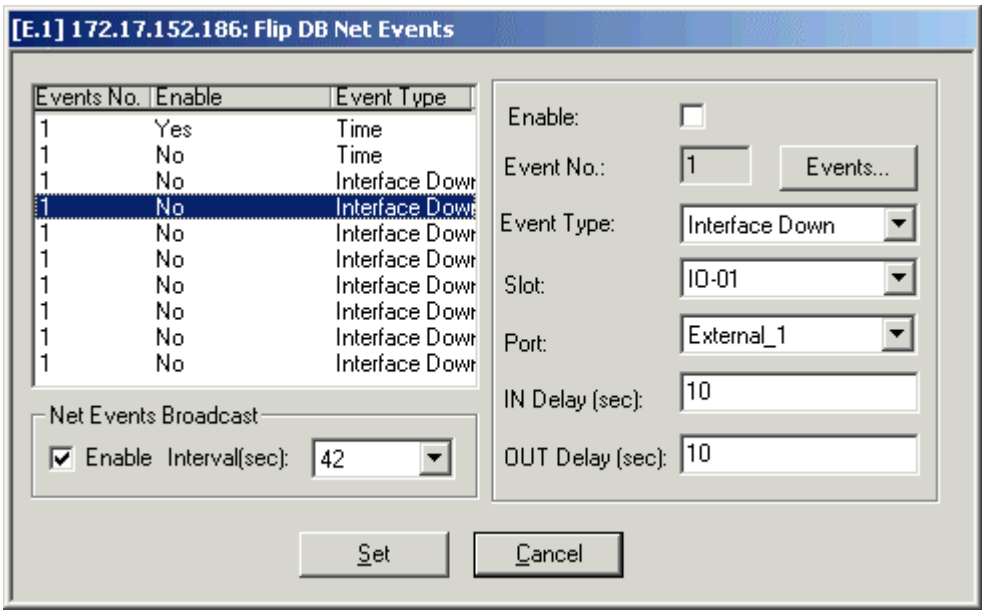


Figure 1-14. Flip DB Net Events Dialog Box Event Type = Interface Down

Table 1-7. Flip BD Net Events Parameters

Parameter	Possible Values / Remarks
Event No.	The net event code number. This number is unique for a particular type of event in the whole net. This prevents usage of the same number by more than one type of event. The available options are **1** to **511**.
Enable	√ in the Enable column indicates that an entry is valid. To add or modify parameters of a net event, click the Enable checkbox (√) on the right side of the dialog box. To delete/cancel an entry, you must first remove the √.
[Events…]	Clicking Events… opens the Net Events List that displays only numbers that are not currently assigned a type of event. Click the event number you want and click <**Set**>.
Event Type	Type of event: **Time, Interface Down** ***Note:*** *You can enable only one Time Event per Day Type. Enabling more than one Time Event per Day Type causes a failure when you try to update or download the Flip DB to the Megaplex (Flip DB Update)* For Event Type=Time, you can set the following parameters:
Day Type	The type of day as determined in the Flip DB Agenda. **Full Workday**, **Partial Workday**, **Weekend**.
Start Time	Time at which RADview activates the event. ***Note:*** *Start Time must be before the End Time*
End Time	Time at which RADview deactivates the event
	For Event Type=Interface Down, you can set the following parameters:
Slot	Slot in the Megaplex in which the selected net event occurs. **IO-1..IO-12** For MP-2104**: IO-1..IO-5**
Port	Port in the Megaplex in which the selected net event occurs **external-1..external-12, internal-1** to **internal-12**, depending on the type of card.
IN Delay (sec)	Delay time between the reporting of a net event as ON and the actual occurrence of the event: **1** to **999**
OUT Delay (sec)	Delay time between the reporting of a net event as OFF and the actual termination of the event: **1** to **999**
Net Event Broadcast	
Enable	Determines if the Net Events will be Broadcasted to other Muxes of the Net or not **Unchecked** (disabled): Net Events will NOT be Broadcasted **Checked** (enabled): Net Events will be Broadcasted
Interval (sec)	When Net Event Broadcast is enabled, this object determines the interval of time in seconds, between two consecutive Net Events transferred over the network **10..40..60**

The Decision Table

In the **Decision Table**, you can define a combination of events that will cause RADview to flip to a specific configuration automatically.

➤ **To set event combinations for activating a specific configuration flip:**

1. From the **Configuration** menu, select **Flip DB** followed by **Decision Table..**.

   The Flip DB Decision Table appears. Each entry in the Flip DB Decision Table defines a combination of events that cause a specific Flip DB action.

2. Configure desired parameters and click <**Set**> to save the Decision Table parameters in the RADview Edit Configuration database.

Note *The Decision Table will be downloaded to the Megaplex only when you invoke the Flip DB>Update command.*

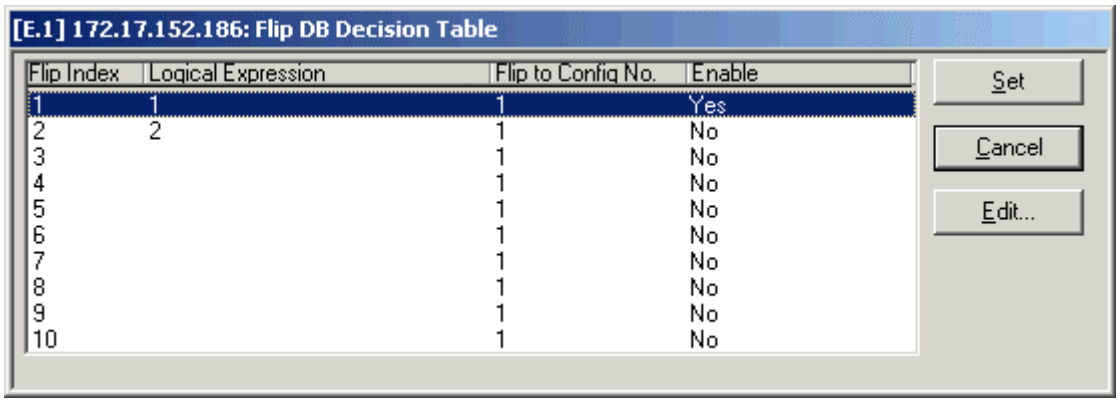


Figure 1-15. Flip DB Decision Table

Table 1-8. Flip DB Decision Table Parameters

Parameter	Possible Values / Remarks
Flip Index	Index number of the entry in the Table according to the order of priority. For example, suppose that multiple event combinations, causing flipping to more than one configuration, occur at the same time. RADview will activate the entry that comes first in the Decision Table.
Logical Expression	Combination of net events that, if they occur, cause RADview to flip to a specific Megaplex configuration. The expression consists of event numbers and the following logical symbols (maximum of 19 characters): & - AND | - OR ! – NOT ( ) – Parentheses enclose a combination of events that comprises a single condition in the logical expression. For example, (2&51)|(!102&4) means that (event no. 2 exists AND event no. 51 exists) OR (event no. 102 does not exist AND event no. 4 exists). ***Note:*** *The logical expression cannot begin with a blank space.*

Parameter	Possible Values / Remarks
Flip to Config No.	ID number of the Megaplex configuration that will be activated if the events written in the logical expression occur.
Enable	√ in the Enable column indicates that an entry is valid.
[Edit…]	Edit entries in the decision table by selecting the entry and clicking <**Edit…**>. The Edit Decision Table Entry dialog box appears. Set the parameters as required and click <**OK**>.

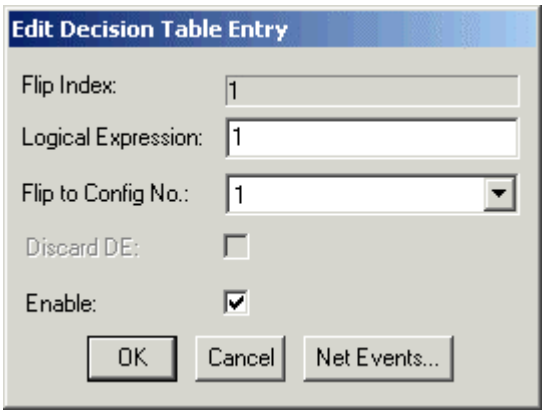


Figure 1-16. Edit Decision Table Entry

➤ **To check if any events written in the logical expression do not exist:**

- In the **Edit Decision Table Entry** dialog box, click <**Net Events..**>.

  The Net Events List appears displaying the defined and enabled net events stored in RADview's database in ascending order. If an event that is written in the logical expression does not appear in this list, the error message, **Logical Expression includes undefined/disabled event/s**, appears after you click <**Set**> in the **Flip DB Decision Table**.

Note

*The purpose of this error message is to inform you that a potential error condition exists. Regardless, pressing <**OK**> in the error message proceeds to save the decision Table in* RADview's *database*

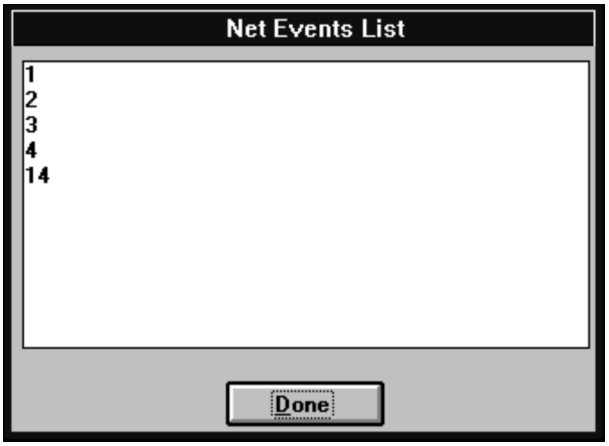


Figure 1-17. Decision Table's Net Event List

Updating (downloading) the Flip DB to the Megaplex

The **Flip DB>Update command** saves (downloads) the information in the Agenda, Net Events and Decision Table to the Megaplex.

Note *This option is only available when there is communication with the Megaplex.*

➤ **To update the Flip DB to the Megaplex:**

1. From the **Configuration** menu, select **Flip DB** followed by **Update.**

   A confirmation message appears.

2. Click <**OK**> to confirm Update operation.

   The Flip configuration is saved in the Megaplex CL card.

   If the sanity check detects errors, RADview aborts the Update Flip DB process.

Reading (Uploading) the Flip DB to the Edit Configuration

The **Flip DB>Read command** reads (uploads) the Flip configuration from the Megaplex agent's mode in the database to the Edit Flip Configuration.

Note *This option is only available when there is communication with the Megaplex.*

➤ **To upload the Flip DB to the Edit Flip Configuration:**

1. From the **Configuration** menu, select **Flip DB** followed by **Read**.

   A confirmation message appears.

2. Click <**OK**> to confirm Read operation.

   The Flip configuration in the Megaplex CL card replaces the existing Edit Flip configuration.

Net Update

The **Net Update** command allows you to save the current Edit Configuration and/or flip configuration to all Megaplexes in the net.

Figure 1-18. Net Update Submenu

Saving the Configuration

The **Save Config** command allows you to save the current Edit Configuration as the Megaplex's temporary configuration without activating it over the net.

➤ **To save the current Edit Configuration as the Megaplex's temporary configuration:**

1. From the **Configuration** menu, select **Net Update** followed by **Save Config**...

   The Net Update Save Config dialog box appears.

2. Configure desired parameters and click <**Apply**>.

   If the sanity check is successful, the download proceeds and the selected Edit Configuration is saved as the temporary configuration of the Megaplex but not activated over the net.

   If warnings appear, completion of the download process requires user confirmation. If the sanity check detects errors, RADview aborts the download process and displays the error message, "**Sanity Check errors encountered by NMS"**. To view a list of detected errors, click <**View Errors**>.

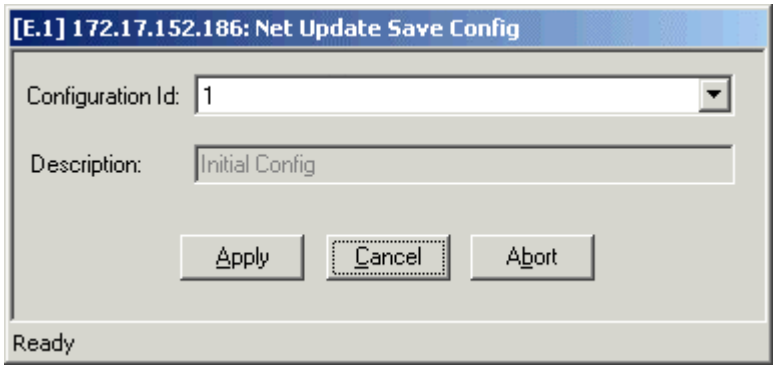


Figure 1-19. Net Update Save Config Dialog Box

Table 1-9. Net Update Save Config Parameters

Parameter	Possible Values / Remarks
Configuration Id	Configuration ID number of Edit Configuration that you want to save as the temporary configuration.
Description	Brief description of the selected Edit Configuration.

➤ **To abort the Save Config operation in process:**

- Click <**Abort**>.

Saving the Flip DB

The **Save Flip DB** command saves the flip configuration as the temporary flip configuration of the Megaplex, without activating it over the net.

➤ **To save the Flip configuration as the Megaplex's temporary flip configuration:**

1. From the **Configuration** menu, select **Net Update and Flip DB…**

   The Net Update Save Flip DB Confirmation Dialog Box appears.

2. Click <**OK**> to confirm the Net Update Save Flip DB.

   If the sanity check detects errors, RADview aborts the Save Flip DB process.

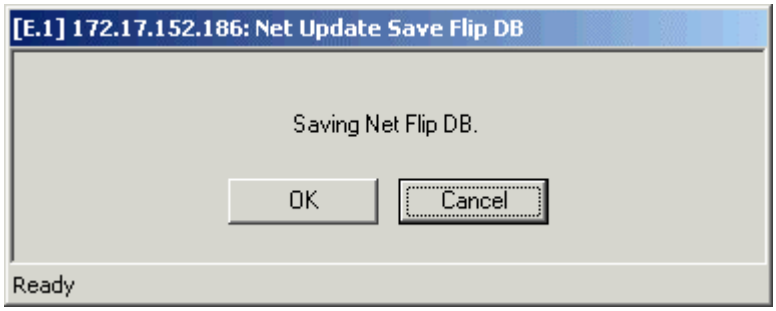


Figure 1-20. Net Update Save Flip DB Confirmation Dialog Box

Setting Signaling Profile Parameters

Megaplex main link ports can be configured to use either legacy CAS (with or without signaling conversion) or the R2 protocol. Different profiles are used to define the format of the signaling information.

➤ **To set signaling profile parameters:**

1. From the **Configuration** menu, select **Signaling Profile…**

   The Signaling Profile dialog box appears.

2. Configure the **Type** of Signaling Profile (Legacy or R2 CAS) for the desired profiles.

3. Configure Legacy Data or R2 Data for selected profiles (described below) and click <**Set**>.

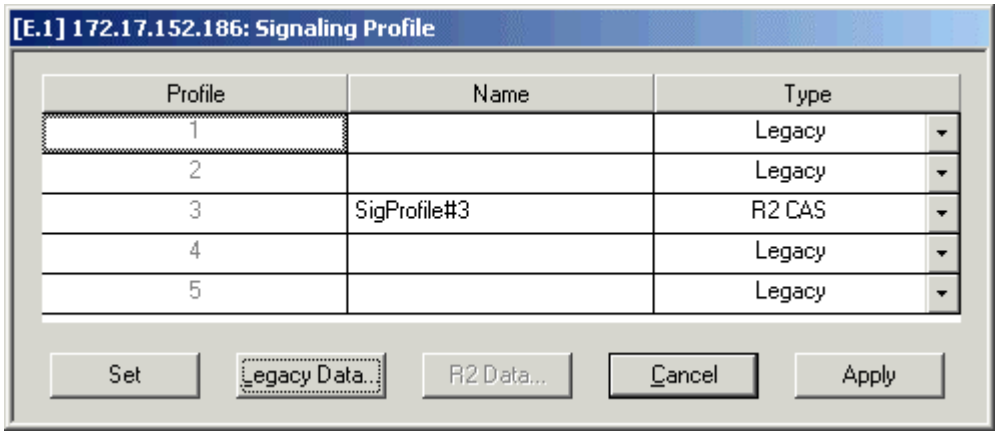


Figure 1-21. Signaling Profile Dialog Box

Configuring Legacy Data Profile

Profiles for legacy signaling are used for regular CAS. These profiles enable the user to define two separate conversions:

- Conversion of signaling information received through a main link, in order to match the internal Megaplex signaling interpretation conventions.
- Conversion of the internal signaling information to the format used by the equipment connected to Megaplex links.

➤ **To set legacy data parameters:**

1. From the **Signaling Profile** Dialog Box, select a profile whose type is Legacy and click <**Legacy Data…**>.

   The Legacy Data dialog box appears.

2. Configure desired parameters.
3. Click <**Set**> to add the changes to the NMS database and close the dialog box.

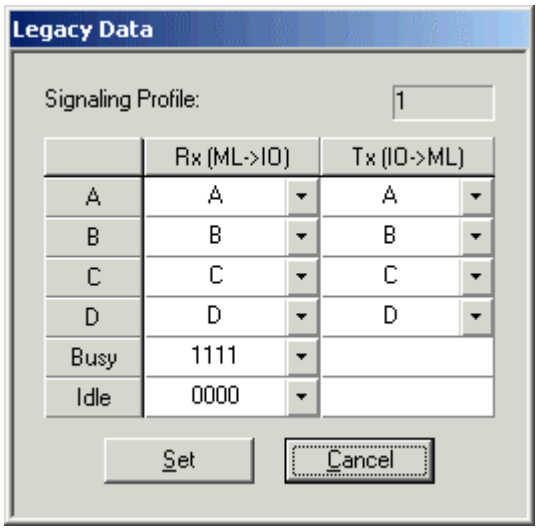


Figure 1-22. Legacy Data Dialog Box

Table 1-10. Legacy Data Parameters

Parameter	Possible Values / Remarks
Signaling Profile	The profile number selected in the Select Profile dialog box **1 to 5**
Rx (ML->IO) column	
A	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
B	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
C	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
D	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
Busy	**0000 .. 1111**
Idle	**0000 .. 1111**
Tx (ML->IO) column	
A	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
B	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
C	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
D	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**

Configuring R2 Data Profile

Most of the parameters included in an R2 profile can be automatically selected by specifying a national (country) implementation. In addition, it is necessary to select the type of link (terrestrial or satellite).

R2 profiles enable the user to specify, for each individual channel (identified by the main link timeslot to which it is routed), the call permissions: incoming only, outgoing only, or both.

➤ **To set R2 data:**

1. From the **Signaling Profile Dialog Box**, select a profile whose type is R2 CAS and click <**R2 Data…**>

   The R2 Data dialog box appears. There are three tabs: **General, Timers** and **Data**.

2. Click on the desired tab to configure parameters
3. Click <**Set**> to add the changes to the NMS database and close the dialog box.

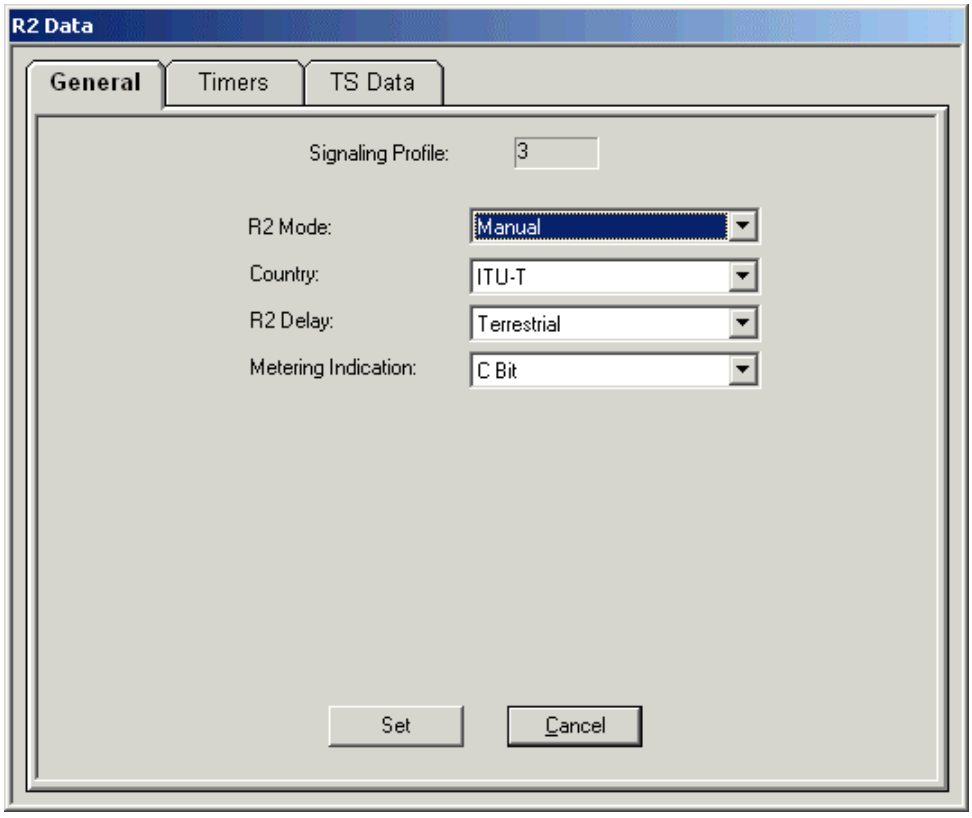


Figure 1-23. R2 Data – General Tab Dialog Box

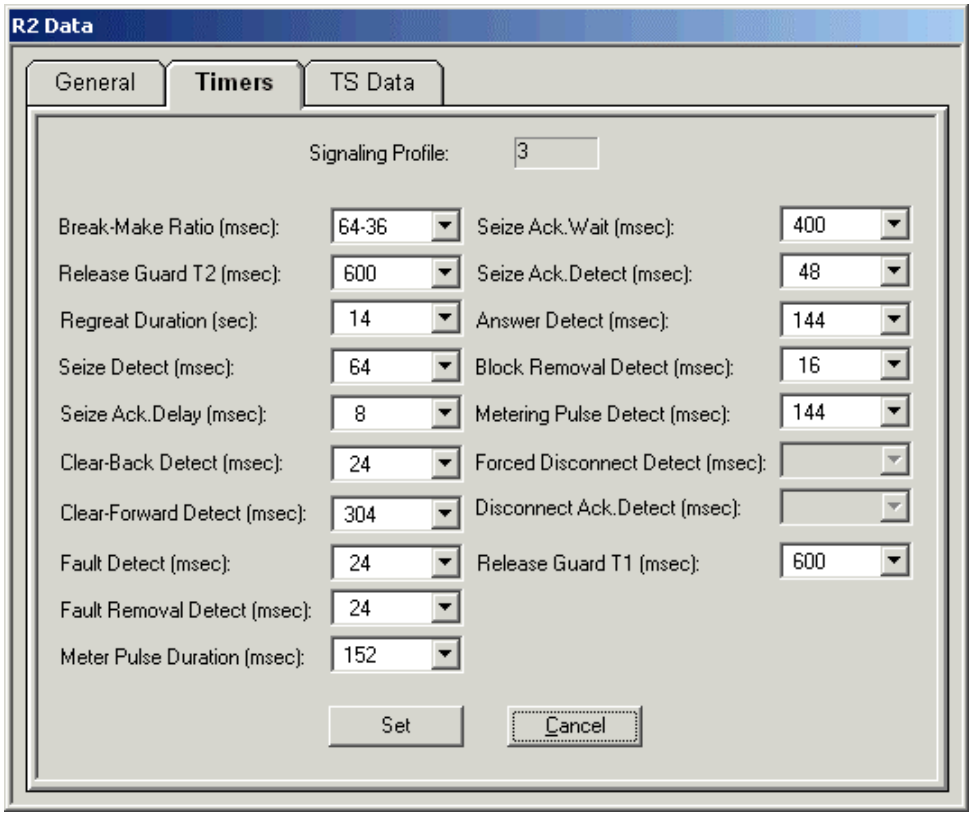


Figure 1-24. R2 Data – Timers Tab Dialog Box

Note *Click on the right mouse button to change the fields in the TS Data dialog box.*

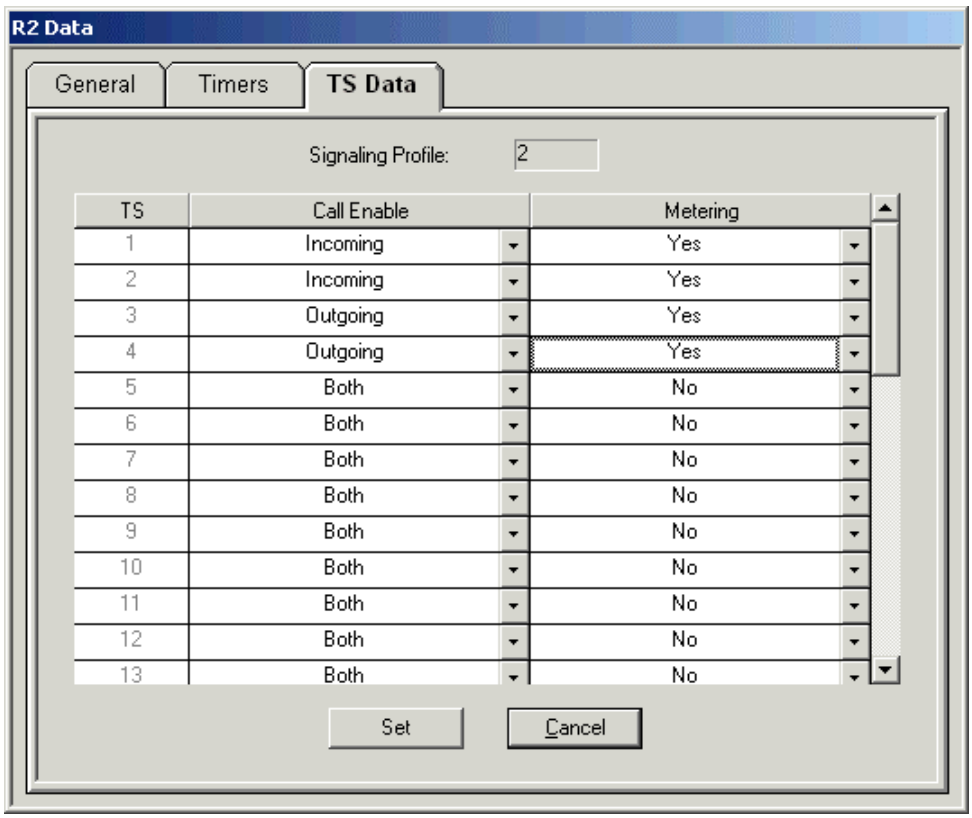


Figure 1-25. R2 Data – TS Data Tab Dialog Box

Table 1-11. R2 Data Parameters

Parameter	Possible Values / Remarks
Signaling Profile	The profile number selected in the Select Profile dialog box **1 to 5**
General Tab	
R2 Mode	**Auto**: default value of timers will be used by R2, according to selected Country **Manual:** user can change the value of R2 timers within the valid limits, specific to each country
Country	**ITU–T, Korea, India, Brazil (continuous), Brazil (pulsed), Argentina, 7, 8, 9, 10**
R2 Delay	Eenables you to configure link as satellite or terrestrial. Seize acknowledge detect timing is much shorter for terrestrial link than for satellite link (1-2 sec) **Terrestrial, Satellite**
Metering Indication	Indicates which Bit will be used for Metering Indication **C Bit, B Bit**
Timers Tab	The parameters of the Timers Tab are Read-Write only when R2 Mode = Manual
Break-Make Ratio (msec)	Break-Make Ratio of Pulse Duration **56–44, 64–36, 80–20**
Release Guard T2 (msec)	Release guard timing before going to idle **16..2000**

Parameter	Possible Values / Remarks
Regret Duration (sec)	Regret duration **14..120**
Seize Detect (msec)	Minimum duration to detect a valid seizure **24..448**
Seize Ack. Delay (msec)	Delay before sending a valid seize ack signal **8..304**
Clear-Back Detect (msec)	Minimum duration to recognize a valid clear-back **24..448**
Clear-Forward Detect (msec)	Minimum duration to recognize a valid clear-forward **200..504**
Fault Detect (msec)	Minimum duration to recognize a block signal **16..104**
Fault Removal Detect (msec)	Minimum duration to recognize a valid block removal signal **16..104**
Meter Pulse Duration (msec)	Duration of metering pulse to be sent **120..304**
Seize Ack. Wait (msec)	Minimum duration to receive seizure acknowledge signal **104..1200**
Seize Ack. Detect (msec)	Minimum duration to recognize a valid seizure acknowledge signal **48..600**
Answer Detect (msec)	Minimum duration to recognize a valid answer signal **64..448**
Block Removal Detect (msec)	Minimum duration to recognize a valid block removal signal **16..96**
Metering Pulse Detect (msec)	Minimum duration of incoming meter pulse **64..448**
Forced Disconnect Detect (msec)	Minimum duration to recognize disconnect signal **304..448**
Disconnect Ack. Detect (msec)	Minimum duration to recognize disconnect acknowledge signal **304..448**
Release Guard T1 (msec)	Minimum duration to release guard. During this time, no new call can be initiated **16..2000**
TS Data Tab	
TS	TS Index **1..31**
Call Enable	Indicates the Enabled Call direction for the specific TS **Both, Incoming, Outgoing**
Metering	Indicates if the specific TS supports Metering **Yes, No**

Setting V5.1 Variants

➤ **To set V5.1 variants:**

- From the **Configuration** menu, select **V5.1 Variants…**

  The V5.1 Variants dialog box appears.

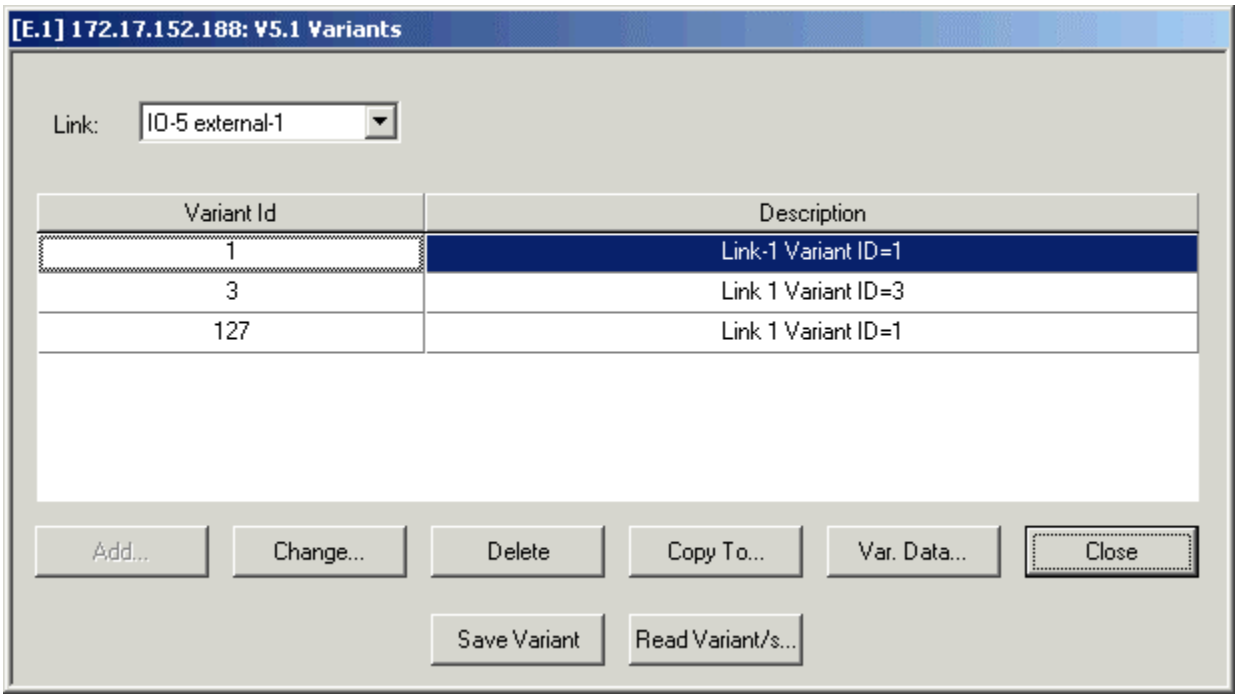


Figure 1-26. V5.1 Variants Dialog Box

Adding V5.1 Variants

➤ **To add a V5.1 variant:**

1. From the **V5.1 Variants Dialog Box** (*Figure 1-26*) click <**Add…**>.

   The Add Variant dialog box appears.

2. Configure variant parameters and click <**Set**>.

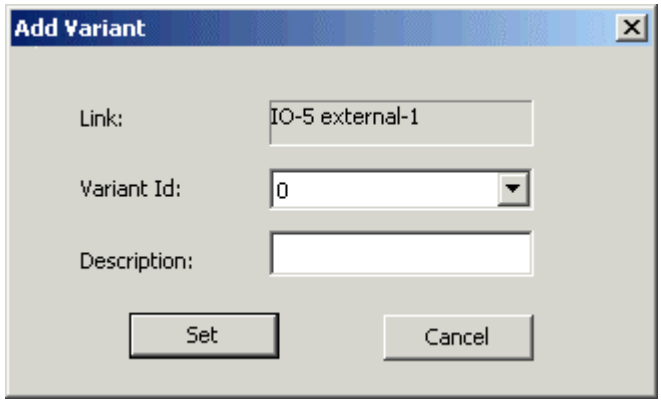


Figure 1-27. Add Variant Dialog Box

Table 1-12. V5.1 Variants Parameters

Parameter	Possible Values / Remarks
Link	<IO Slot>:<Port> IO Slot: **IO-1..IO-12** Port: **External-1..External-2, Internal-1..Internal-2**
Variant ID	Variant ID **0..127**
Description	Description of Variant Maximum 19 characters

Changing V5.1 Variant Description

➤ **To change the description for a V5.1 variant:**

1. Select the desired variant in the V5.1 Variants Dialog Box (Figure 1-26) click <**Change…**>.

   The Change Description dialog box appears.

2. Enter new description and click <**Set**>.

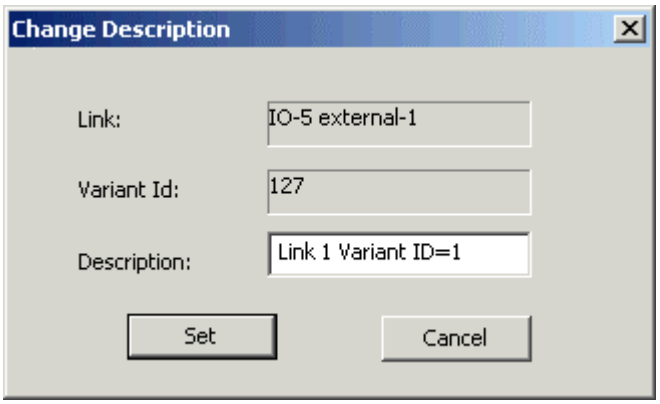


Figure 1-28. Change Description Dialog Box

Deleting V5.1 Variant

➤ **To delete a V5.1 variant:**

1. Select the desired variant in the V5.1 Variants Dialog Box (Figure 1-26) click <**Delete**>.

   A confirmation message appears.

2. Click <**OK**> to confirm delete.

Copying V5.1 Variant

➤ **To copy a V5.1 variant to another link:**

1. Select the desired variant in the V5.1 Variants Dialog Box (Figure 1-26) click <**Copy To…**>.

   The Copy Variant dialog box appears.

2. Select destination for copy operation by checking appropriate checkbox: **All Variants** or **Selected Variant**.

3. Configure **Copy to Link** and **Copy to Variant.**
4. Click <**Set**>.

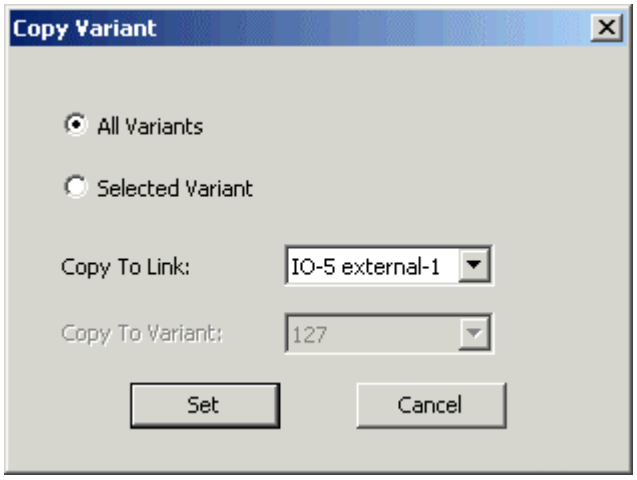


Figure 1-29. Copy Variant Dialog Box

Defining V5.1 Variant Data

➤ **To define V5.1 variant data in the NMS database:**

1. Select the desired variant in the V5.1 Variants Dialog Box (Figure 1-26) click <**Var. Data…**>.

   The Variant Data dialog box appears (Figure 1-30).

2. Configure desired parameters and click <**Set**>.

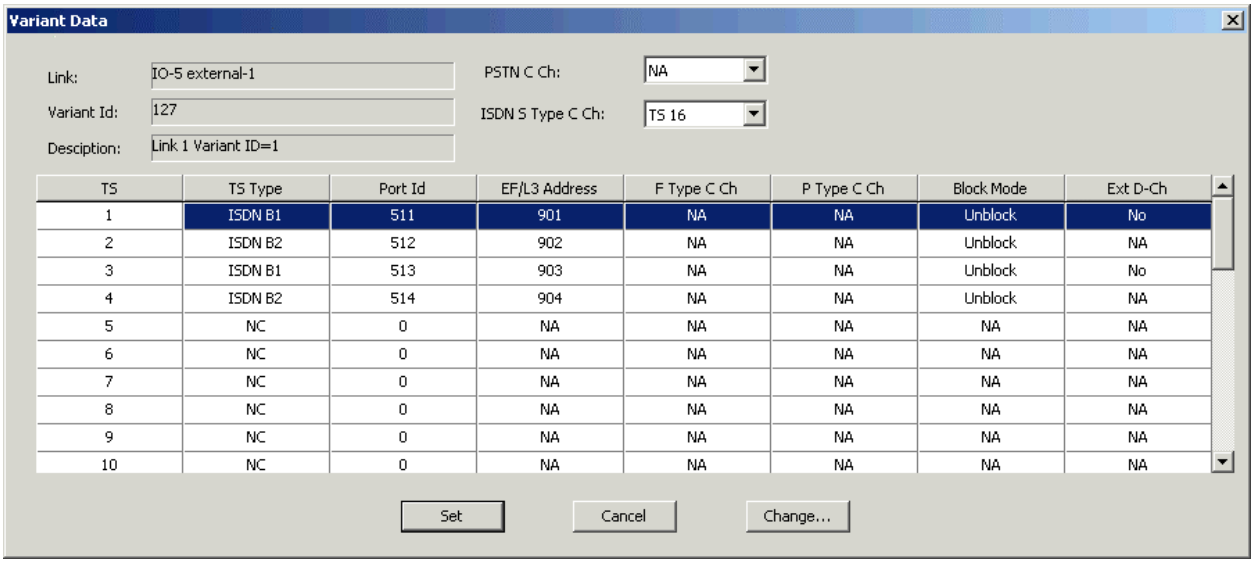

Variant Data
Link:
IO-5 external-1
Variant Id:
127
Desciption:
Link 1 Variant ID=1
PSTN C Ch:
NA
ISDN S Type C Ch:
TS 16
TS | TS Type | Port Id | EF/L3 Address | F Type C Ch | P Type C Ch | Block Mode | Ext D-Ch
1 | ISDN B1 | 511 | 901 | NA | NA | Unblock | No
2 | ISDN B2 | 512 | 902 | NA | NA | Unblock | NA
3 | ISDN B1 | 513 | 903 | NA | NA | Unblock | No
4 | ISDN B2 | 514 | 904 | NA | NA | Unblock | NA
5 | NC | 0 | NA | NA | NA | NA | NA
6 | NC | 0 | NA | NA | NA | NA | NA
7 | NC | 0 | NA | NA | NA | NA | NA
8 | NC | 0 | NA | NA | NA | NA | NA
9 | NC | 0 | NA | NA | NA | NA | NA
10 | NC | 0 | NA | NA | NA | NA | NA
Set
Cancel
Change...

Figure 1-30. Variant Data Dialog Box

➤ **To change Variant TS values:**

1. In the Variant Data dialog box, select desired variant and click <**Change…**>.

   The Change Variant Data dialog box appears displaying two tabs.

2. For each tab, change desired parameters and click <**OK**>.

3. Click <**Set**> in the Variant Data dialog box (Figure 1-30).

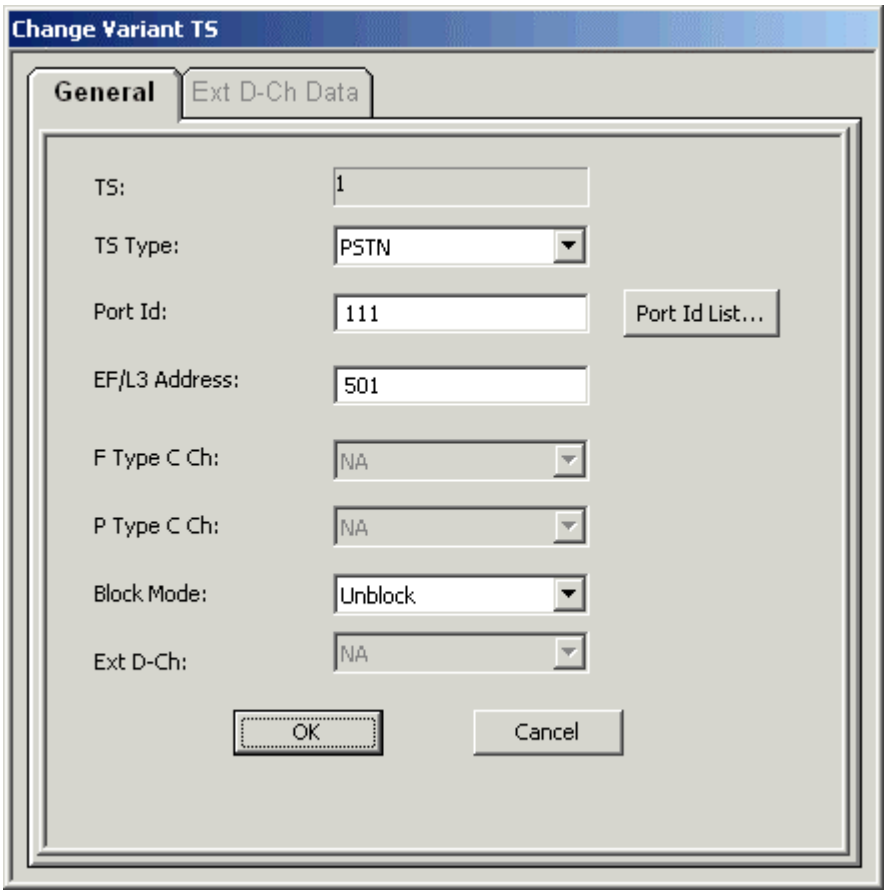


Figure 1-31. Change Variant TS Dialog Box – Gen. Tab

Table 1-13. V5.1 Variants Parameters – Gen. Tab

Parameter	Possible Values / Remarks
TS	Time Slot **1..31**
TS Type	Time Slot Type **NC, PSTN, ISDN B1, ISDN B2, C Channel, Permanent B1, Permanent B2, Semi-Permanent B1, Semi-Permanent B2**
Port ID	IO Port ID this TS is connected to **0..16777215**
EF/L3 Address	Address of the IO port this TS is connected to. IO port is identified according to its Address: for ISDN ports: EF Address. Valid values: 0..8175 for PSTN ports: L3 Address. Valid values: 0..32767 65535=notApplicable (FFFF). **NA, 0..32768**
Slot	Slot containing the IO port this TS is connected to **NA, IO-1..IO-12**
Port	IO Port this TS is connected to **NA, external-1..external-16, internal-1.. internal-2**

Parameter	Possible Values / Remarks
F Type C Ch	Indicates which TS will be used for F-Type C channel **NA, TS 15, TS 16, TS 31**
P Type C Ch	Indicates which TS will be used for P-Type C channel **NA, TS 15, TS 16, TS 31**
Block Mode	Indicates if this TS will be Blocked/not Blocked and how: **Block:** - done locally **Block Request:** - according to external request of the telephone exchange **Unblock**
Ext D-Ch	Indicates if this TS is an ISDN D channel that comes via Bypass from a non-V5.1 ML. **No, Yes**

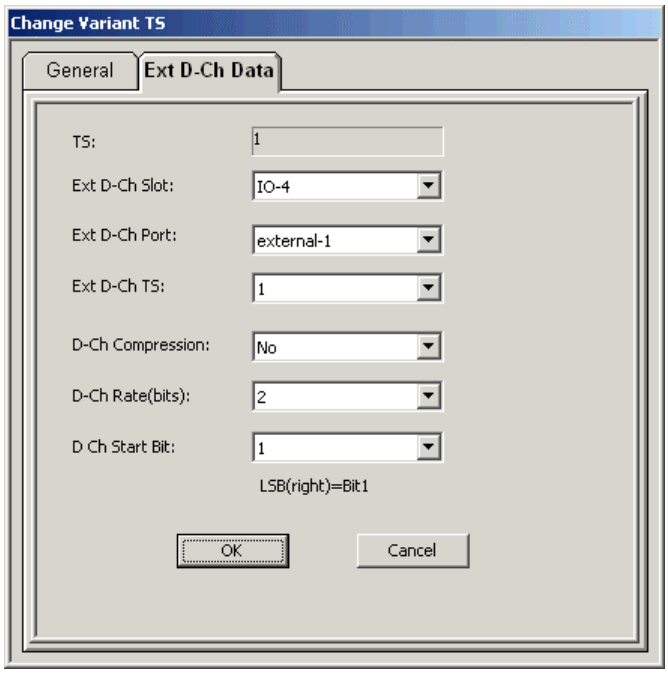


Figure 1-32. Change Variant TS Dialog Box – Ext. D-Ch Data Tab

Note *Ext. D-CH Data parameters are available only when* Ext D-Ch=Yes.

Table 1-14. V5.1 Variants Parameters – D-Ch. Data Tab

Parameter	Possible Values / Remarks
TS	Time Slot **1..31**
Ext D-Ch Slot	Indicates the Slot of the non-V5.1 ML on which the External D channel TS is defined (and is transferred via Bypass between the V5.1 ML and the non-V5.1 ML) **IO-1..IO-12**
Ext D-Ch Port	Port of Ext D-Ch Slot **external-1.. external-2, internal-1.. internal-2**

Parameter	Possible Values / Remarks
Ext D-Ch TS	TS on the non-V5.1 ML on which the External D channel TS is defined (and is transferred via Bypass between the V5.1 ML and the non-V5.1 ML) **1..31**
D-Ch Compression	Indicates if this ISDN D channel TS is Compressed or not **No, Yes**
D-Ch Rate (bits)	Rate of the ISDN D channel **2, 4, 8**
D Ch Start Bit	Start Bit of the ISDN D channel on the TS of the non-V5.1 ML on which it is defined **1, 3, 5, 7**

Saving V5.1 Variants

Note *Saving V5.1 Variants causes the system to perform a Sanity Check. To ensure that you will successfully save the V5.1 Variants, perform an update of the system before saving the V5.1 variants. V5.1 Variants will be saved only if the update operation succeeds without errors (see Updating the Configuration to the Agent) and the configuration complies with the V5.1 variant configuration*

➤ **To save a V5.1 variant:**

1. Select the desired variant in the V5.1 Variants Dialog Box (Figure 1-26) click <**Save Variant**>.

   A confirmation message appears.

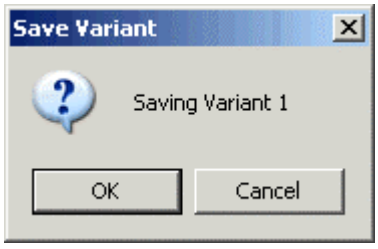


Figure 1-33. Save V5.1 Variants

2. Click <**OK**> to confirm save.

Reading V5.1 Variants

The **Read** operation enters the selected Variant data in the NMS database, for the selected link.

➤ **To enter V5.1 Variant data in the NMS database:**

1. Select the desired variant in the V5.1 Variants Dialog Box (Figure 1-26) click <**Read Variant/s…**>.

   The Read Variants dialog box appears listing all existing programmed variants for this link in the agent configuration.

2. Select all variants by clicking the All Variants checkbox or select an individual variant.

3. To see more information about a selected variant, click <**Var. Data**> to display the Variant Data dialog box (Figure 1-30).
4. Click <**OK**> to enter the data in the NMS database.

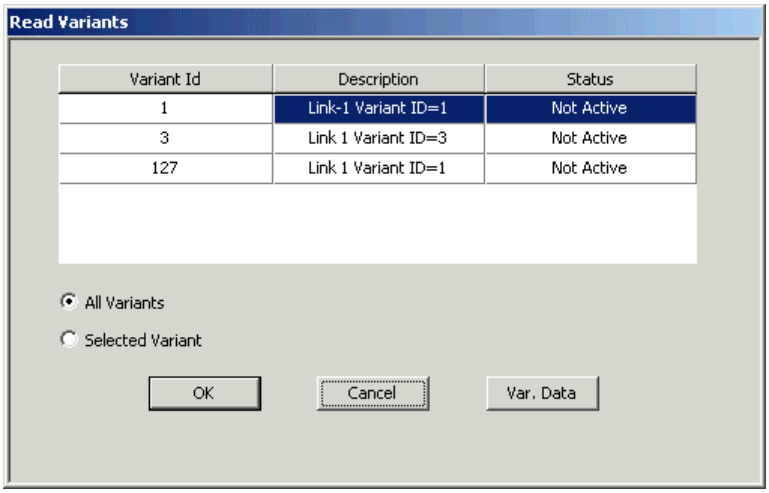


Figure 1-34. Read V5.1 Variants

Setting Redundancy Table Parameters

The **Redundancy Table** command enables you to set redundancy parameters for the Megaplex.

Note *Only slots containing MTML and HSH cards are available for redundancy operations. MTML-H ports can be redundant only to MTML-H ports; HSH ports can be redundant only to HSH ports.*

➤ **To view or change redundancy table parameters:**

- From the **Configuration** menu, select **Redundancy Table….**

  The Redundancy Table dialog box appears. Fields in the table (marked with an asterisk *) can be reordered by clicking on their columns. Redundancy Mode will display the parameters in the following order: Y Cable, Dual Cable Parallel Tx. Additionally every group will be displayed according to Primary Slot and Port ascending order.

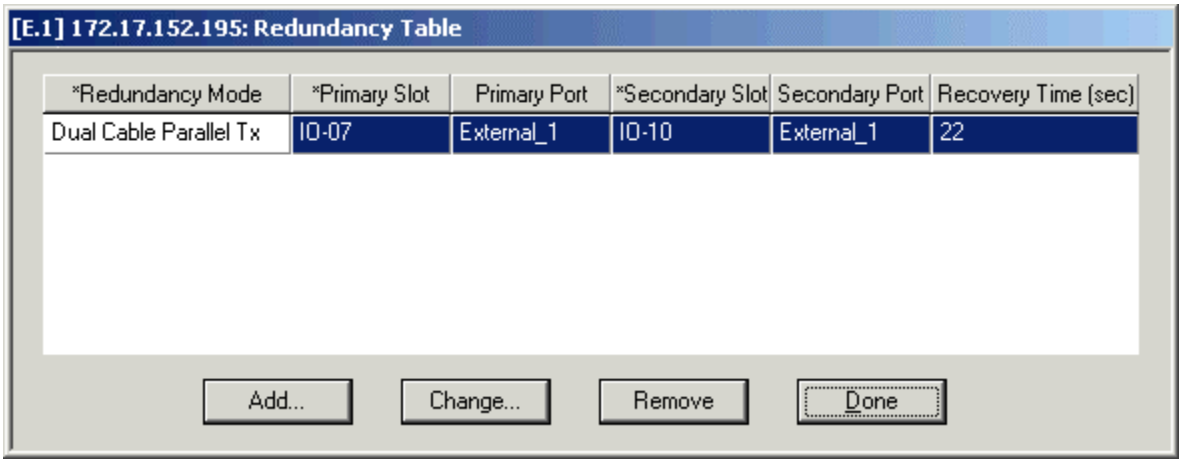


Figure 1-35. Redundancy Table Dialog Box

Table 1-15. Redundancy Table Parameters

Parameter	Possible Values / Remarks
Redundancy Mode	Redundancy Mode for the card **Y Cable**, **Dual Cable Parallel Tx**
Primary Slot	Primary Slot for the card **NA**, **IO-1..IO-12**
Primary Port	Primary Port for the card **External-1..External-2, Internal-1, Bundle1..Bundle120** ***Note:*** *For ML-1/T1, ML-1/E1 cards: only external-1 is available* *For MLML-H, HSH cards: only external-1 is available*
Secondary Slot	Secondary Slot for the card **NA**, **IO-1..IO-12**
Secondary Port	Secondary Port for the card **External-1..External-2, Internal-1, , Bundle1..Bundle120** ***Note:*** *For ML-1/T1, ML-1/E1 cards: only external-1 is available* *For MLML-H, HSH cards: only external-1 is available*
Recovery Time (sec)	Recovery time in seconds **1..99**
[Add…]	To open the Add Redundancy Couple dialog box, click <**Add…**>. Select the desired parameters and click <**Set**>.
[Change…]	To open the Change Redundancy Couple dialog box, select a line in the table and click <**Change…**>. Select the desired parameters and click <**Set**>.
[Remove]	To remove a Redundancy Couple, select a line in the table and click <**Remove**>.

Configuring Bundles

Note *Bundles defined as Redundant in the Redundancy Table will not always have the same Dest Name and Dest Bundle. If you use the redundancy feature as Broadcast, the destinations will be different.*
When both redundant bundles are related to the same Time Slots (for a specific port), only one appears in the Bundles dialog box. A Time slot can be assigned to only one bundle.

➤ **To view the bundle connection table:**

- From the **Configuration** menu, select **Bundle Connection Table…**

The Bundle Connection Table appears.

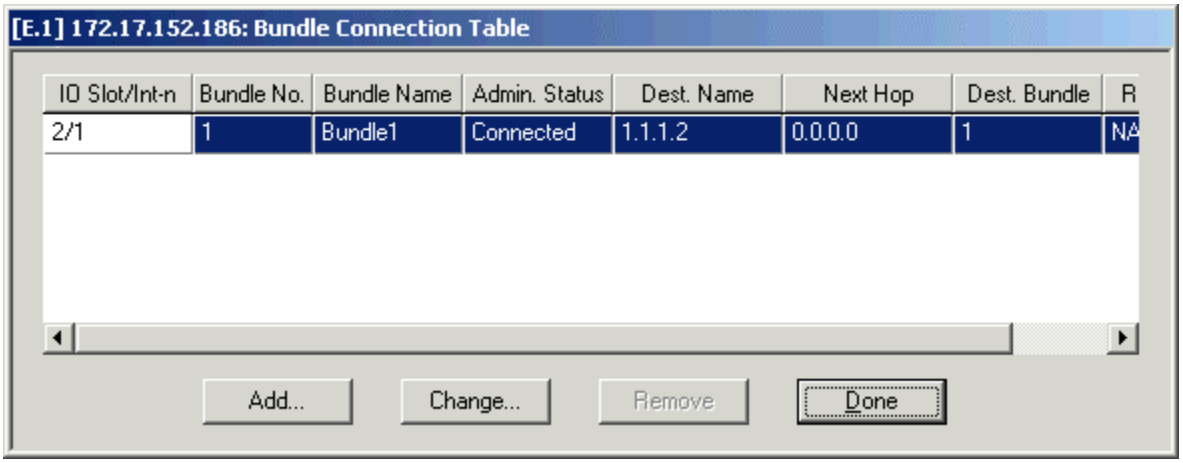


Figure 1-36. Bundle Connection Table

Table 1-16. Bundle Connection Parameters

Parameter	Possible Values/Remarks
IO Slot / Int–n	Slot or Int-n to be configured **for Slots: 1–1..12** **for Int–n: 1..12–2**
Bundle No.	**1–120**
Bundle Name	Bundle name for selected channel. Table will display one bundle name per line
Admin Status	**Connected**, **Disconnected** (frames will not be sent from this channel)
Dest. Name	Logical name or IP address of the destination mux
Next Hop	Indicates IP address to which the Ehternet frame will be sent when the Dest. Name IP is not in the device subnet
Dest. Bundle	Bundle number in the destination mux **1–2016**
Rdn Bundle	**NA**, **Number of redundant bundle**
Exit Port	**External–1**, **External–2**, **Auto**

➤ **To add an entry in the Bundle Connection Table:**

1. In the **Bundle Connection Table**, click <**Add...**>.
   The Add Bundle dialog box appears.
2. Enter the required changes.
3. Click <**Apply**> to add the new entry to the bottom of list in the Bundle Connection Table.

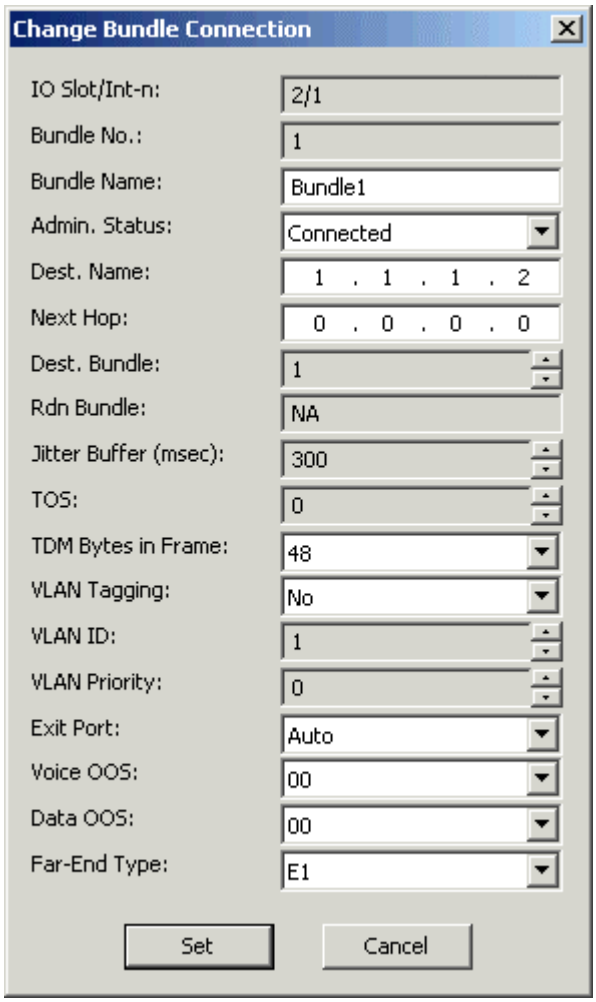


Figure 1-37. Add Bundle Dialog Box

Table 1-17. Add Bundle Connection Parameters

Parameter	Possible Values/Remarks
Bundle No.	**1–120**
Bundle Name	Bundle name for selected channel. Table will display one bundle name per line ***Note:*** *Bundle name should be unique*
Admin Status	**Connected**, **Disconnected** (frames will not be sent from this channel)
Dest. Name	Logical name or IP address of the destination mux

Parameter	Possible Values/Remarks
Next Hop	Indicates IP address to which the Ehternet frame will be sent when the Dest. Name IP is not in the device subnet
Dest. Bundle	Bundle number in the destination Ipmux device **1–2016**
Jitter Buffer (μsec)	Depth of the jitter buffer (elastic buffer per link whose size is configurable in units of μs). **300..30,000 μs**
ToS	IP ToS (Type of Service) assigned to this channel **0-255** Configures IP ToS field in the IP frames transmitted by the device. Configures the entire byte – not only the 3 ToS bits. ToS assignment applies to all TDM packets leaving mux.
TDM Bytes in Frame	UDP payload (one-eight) length enabling reduction of Ethernet throughput **48**, **96**, **144**, **192**, **240**, **288**, **336**, **384**
VLAN Tagging	**No, Yes** ***Note:*** *If two bundles use the same VLAN ID and same exit port, VLAN Tagging should be the same for both*
VLAN ID	VLAN ID **0-4000**
VLAN Priority	VLAN Priority (Enabled only when VLAN Tagging=Yes) **0-7**
Exit Port	**External–1, External–2, Auto**
Voice OOS	Voice out-of-service code transmitted on voice time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box **00-FF** (hexadecimal)
Data OOS	Data out-of-service code transmitted on data time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box **00-FF** (hexadecimal)
Far-End Type	Type of the Far-End device (available only for Agents with SW version ≥ 9.xx **E1, T1-ESF, T1-D4**

➤ **To change an entry in the Bundle Connection Table:**

1. In the **Bundle Table**, select a bundle and click <**Change...**>.

   The Change Bundle Connection dialog box appears. The Parameters are the same as those in *Table 1-17*.

2. Configure desired parameters and click <**Set**>.

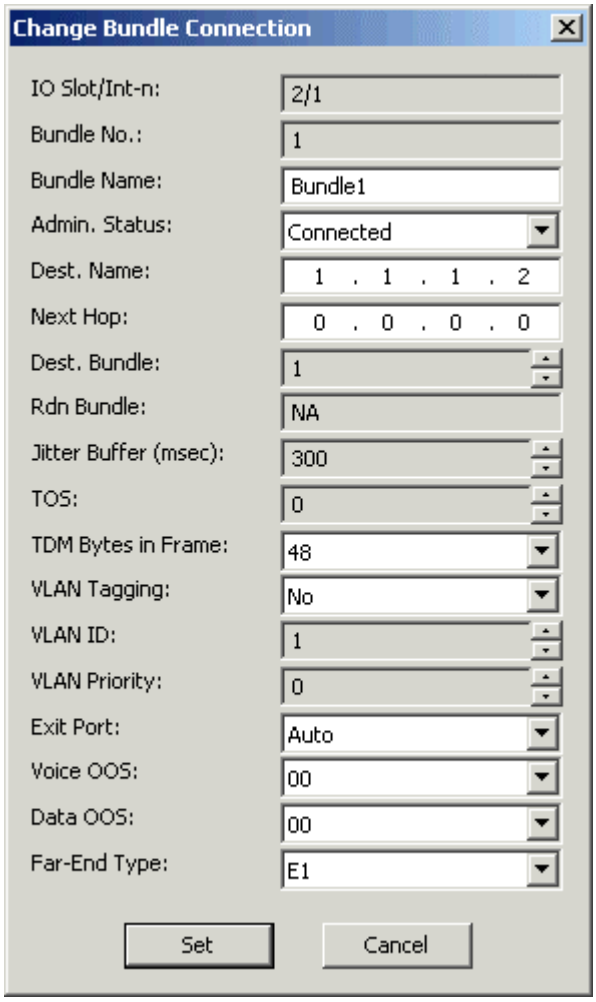


Figure 1-38. Change Bundle Dialog Box

➤ **To remove an entry in the Bundle Connection Table:**

Note *You cannot remove bundles with connected Time Slots.*

1. In the **Bundle Table**, select a bundle and click <**Remove**>.
   A message appears asking you to confirm the delete.
2. Click <**OK**> to remove the entry from the NMS database.

Configuring Managers Routing Table

➤ **To view the Managers Routing table:**

- From the **Configuration** menu, select **MNG Routing Table…**

  The Managers Routing Table appears.

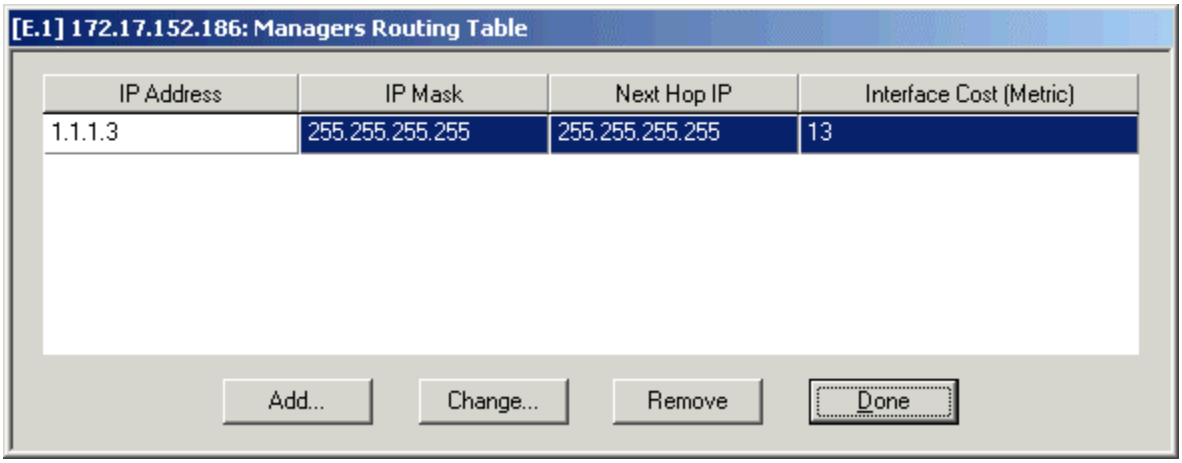


Figure 1-39. Managers Routing Table

Table 1-18. Managers Routing Parameters

Parameter	Possible Values / Remarks
IP Address	IP Address of manager
IP Mask	IP Address Mask
Next Hop IP	Indicates IP address to which the frame will be sent when the Dest. Name IP is not in the device subnet
Interface Cost (Metric)	**1..15**

➤ **To add an entry in the Managers Routing Table:**

1. In the Managers Routing Table, click <**Add...**>

   The Add Managers Routing dialog box appears (*Figure 1-40*).

2. Enter the required changes.
3. Click <**Apply**> to add the new entry to the bottom of list in the Managers Routing Table.

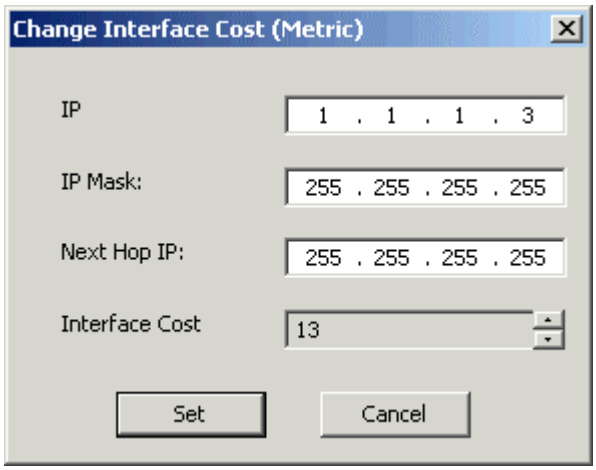


Figure 1-40. Add Managers Routing Dialog Box

➤ **To change the interface cost of a manager:**

1. In the **Managers Routing Table**, select a manager and click <**Change...**>.
   The Change Managers Routing Table dialog box appears.
2. Configure desired Interface Cost and click <**Set**>.

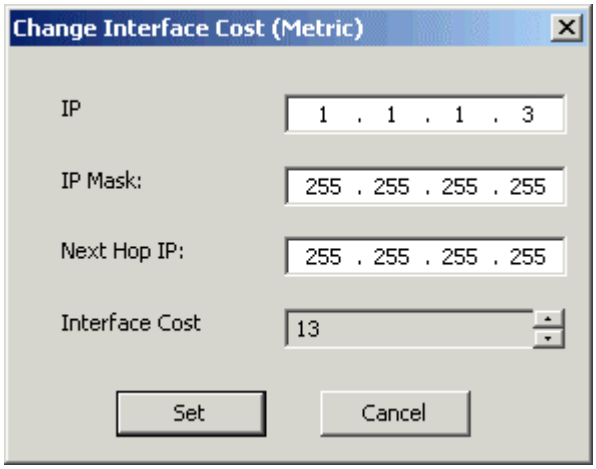


Figure 1-41. Change Interface Cost Dialog Box

➤ **To remove an entry in the Managers Routing Table:**

- In the **Managers Routing Table**, select an entry and click <**Remove**>.

  The entry is deleted from the NMS database.

Polling the Agent

You can manually poll the agent at any given instant. This is useful when you don't want to wait until the next automatic polling interval.

➤ **To manually poll the agent:**

- From the **Configuration** menu, select **Poll Agent.**

  The system polls the agent immediately.

Displaying Sanity Check Results

In the Megaplex Level of the Edit Configuration, you can display the results of the Megaplex's latest sanity check.

➤ **To display the latest sanity check results:**

- From the **Fault** menu, select **Sanity Check Errors…**

  The Sanity Check Error List appears displaying a list of errors and/or warnings detected during the latest sanity check.

  If the latest sanity check detected no errors, the message "**NO SANITY ERRORS"** appears.

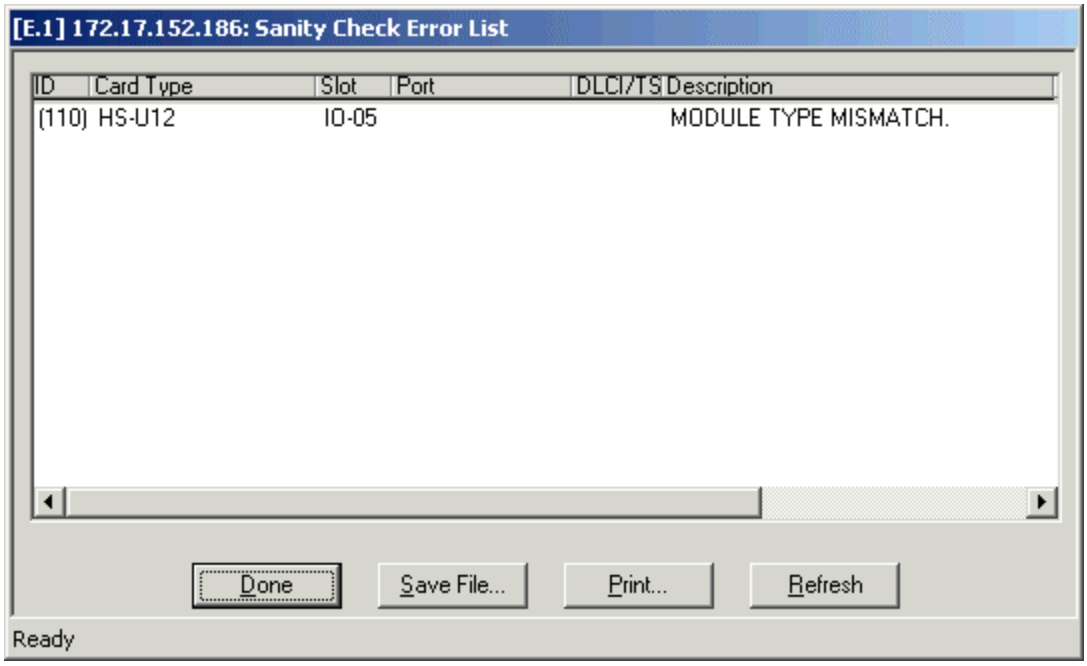


Figure 1-42. Sanity Check Error List

Table 1-19. Sanity Check Error Parameters

Parameter	Possible Values / Remarks
Slot	Slot in which the error was detected.
Card Type	Type of card in which the error was detected.
Port	Port in which the error was detected.
TS	Time Slot in which the error was detected.
Description	Brief description of the error.
[Save File…]	Click **Save File…** to save the Sanity Check Errors List in a file. The Save dialog box appears with the default output file name output.txt. This file name can be changed, if desired. Enter path and filename and Click <**OK**>.

Displaying the Agent View

If the Edit Configuration only is displayed on the screen, you may also display the Agent view. This command is only available when there is communication with the Megaplex.

➤ **To display the Agent view of the application window:**

- From the **Window** menu, select **Agent View** followed by **On**.

  The actual agent configuration appears below the Edit Configuration view.

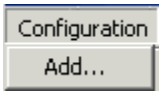
1.4 Card Level Configuration Operations

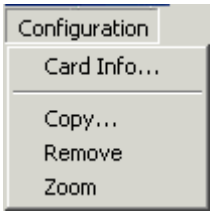
Table 1-20 lists the different management options for the card level.

Note *Card Level Configuration menu options are dependent upon the selected card. You cannot copy or zoom in on PS cards, empty slots, and unknown cards.*

Table 1-20. Card Level Management Options

Tasks – Configuration	Dialog Box and Parameter Location	Path
Adding a new card in the mux	New Card dialog box (*Figure 1-45*)	Configuration ➥Add…
Displaying zoomed card view	Zoomed Card View (*Figure 1-43*)	Configuration ➥Zoom
Displaying card information	Card Information dialog box (*Figure 1-44*)	Configuration ➥Card Info…
Copying card's configuration	Copy Card dialog box (*Figure 1-46*)	Configuration ➥Copy…
Removing a card	See *Removing* a Card	Configuration ➥Remove





Zooming to a Card View

You may display a more detailed view of a card, including individual ports.

➤ **To display the Card View:**

- Double click on a card in the mux or select a card and from the **Configuration** menu select **Zoom**.

  The Zoomed card dialog box appears.

Note *In the Edit Configuration mode, you cannot zoom in on a PS card slot, empty slot, unknown or CL card slot.*

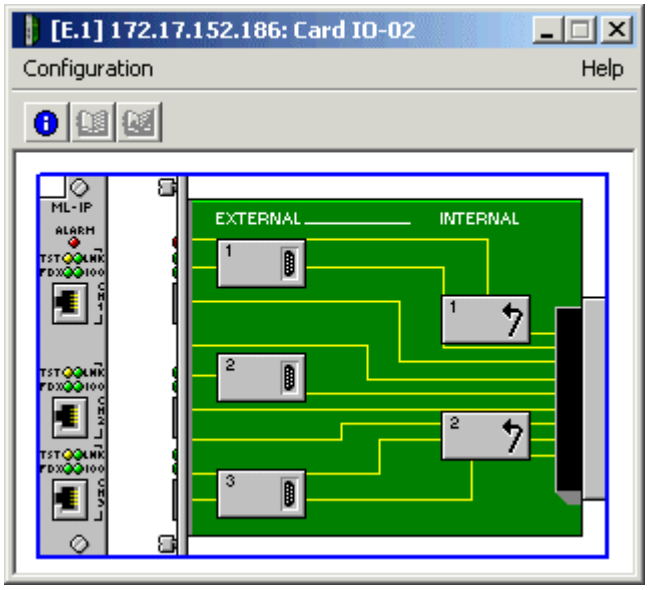


Figure 1-43. Zoomed Card View

➤ **To exit the Card View:**

- Double click the upper left hand corner of the **Zoomed Card View** window.

Displaying Card Information

The **Card Info** command displays physical configuration information about the selected card.

➤ **To display information about the selected card:**

1. Select the card in the mux.
2. From the **Configuration** menu, select **Card Info...**

   The Card Information dialog box appears.

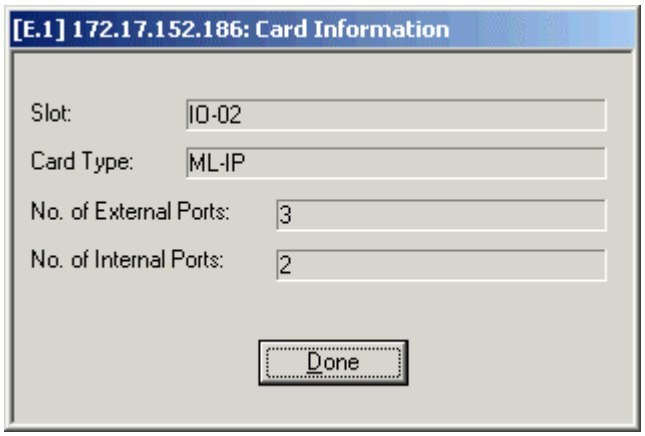


Figure 1-44. Card Information Dialog Box

Table 1-21. Card Information Parameters

Parameter	Possible Values / Remarks
Slot	Slot in which the selected card is inserted
Card Type	Type of the selected card
No. of External Ports	Number of external ports in the selected card
No. of Internal Ports	Number of internal ports in the selected card

Adding a New Card

The **Add** command allows you to program a new card configuration in an empty slot in the Edit Configuration mode.

➤ **To add a new card to the configuration:**

1. In the **Edit Configuration** mode, click an empty slot.
2. From the **Configuration** menu, select **Add…**

   The New Card dialog box appears containing the number of the selected slot and a list of all cards supported by the current Megaplex.
3. From the **New Card** list, select the required card type. If necessary, drag the scroll bar to view other card names.

Note *Only certain combinations of cards are allowed. A warning message is displayed when the user attempts to add a card that will not work in conjunction with existing cards.*
ML (Main Link) cards work in conjunction with common logic cards.
For MP 2100:
Slots PS 1 and PS 2 can only contain PS cards.
Slots CL 1 and CL 2 can only contain CL cards.
Slots IO 1 to IO 12 can take all other types, including unknown.
For MP 2104:
Slot PS 1 can only contain a PS card.
Slot CL 1 can only contain a CL card.
Slots IO 1 to IO 5 can take all other types, including unknown.
For each MUX, only one ACM card can be used. More than one ACM card will cause a sanity check error.

4. Click <**Set**>.

   The selected card is added to all existing Edit Configurations.

The card types supported by the Megaplex and which model supports them are listed in the following table. X indicates that the card is supported, -- indicates that the card is not supported.

Note ** indicates that the card is supported for Megaplex agent software versions ≥8.XX.*

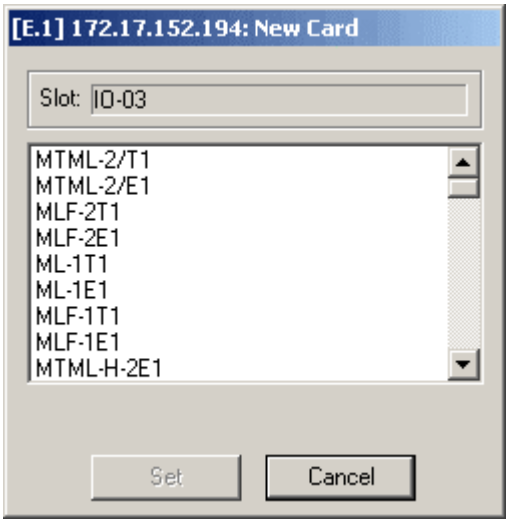


Figure 1-45. New Card Dialog Box

Table 1-22. Card Types Supported by Megaplex

Card Type	MP2100; MP2104
PS-60W	**X**
PS-100W	**X**
PS-180W	**X (2100 only)**
MCL-2	**X**
MCL-2 ETH	**X**
MTML-2/T1	**X**
MTML-2/E1	**X**
MLF–2T1	**X**
MLF–2E1	**X**
ML–1T1	**X**
ML–1E1	**X**
MLF–1T1	**X**
MLF–1E1	**X**
ML-IP*	**X**
MTML–H–2E1	**X**
MTML–H–2E1/2W	**X**
MTML–H–2T1	**X**
HSH–2T1	**X**
HSH-2T1/2W	**X**
HSH–2E1	**X**
HSH-2E1/2W	**X**

Card Type	MP2100; MP2104
ACM	**X**
HS-2	X
HS-3	X
HS-703	X
HS-Q	X
HS-P	X
HS-ETH*	X
HS-DP	X
HS-Q/M	X
HS-Q/N	X
HS-R	X
HS-S	X
HS-U/1	X
HS-U6	X
HS-U12	X
HS-U/I	X
LS-2/A(X.50)	X
LS-2/A(X.58)	X
LS-2/A(SDM)	X
LS-2/A/2TS	X
LS-2/M	X
LS-6	X
LS-12	X
MBE-A	X
MBE-B	X
MBE-U	X
TRE	X
VC-2/E&M	X
VC-2/FXO(1)	X
VC-2/FXO(2)	X
VC-2/FXO(3)	X
VC-2/FXS(1-PLAR)	X
VC-2/FXS(2)	X
VC-2/FXS(3)	X

Card Type	MP2100; MP2104
VC-2/R2	X
VC-6A/LB	X
VC-6A/E&M	X
VC-6/FXO	X
VC-6A/FXS	X
VC-6AG/FXO	X
VC-6AG/FXS	X
VC-6/E&M	X
VC-6/FXO	X
VC-6/FXS	X
VC-8/E&M*	X
VC-8/FXO*	X
VC-8/FXS*	X
VC-16/E&M*	X
VC-16/FXO*	X
VC-16/FXS*	X
VC-16A	X
VC-Q	X
VF-3/E&M	X
VF-3/FXS	X
VF-3/FXO	X
VF-PBX	X
VF-PBX/T1	X
VF-PBX/E1	X
Unknown	X
VF-PBX* (see Note)	X
VF-PBX/T1* (see Note)	X
VF-PBX/E1* (see Note)	X
Unknown	X

Note *Due to power supply limitation, it is not recommended to use the VF-PBX family of cards with the MP-2104 hub. If you choose to use the card, only one VF-PBX card can be used in the 2104 hub.*

Copying a Card's Configuration

The Copy command allows you to copy the selected card's configuration to a destination slot within the current Megaplex or to another Megaplex in the net.

➤ **To copy a card configuration to another slot:**

1. In the **Edit Configuration mode**, click the card whose configuration you want to copy.
2. From the **Configuration** menu, select **Copy...**.

   The Card Copy dialog box appears.
3. Select the required copy parameters and click <**Set**>. The source configuration is copied to its destination(s).

   If the destination slot was previously empty, the new card type and its default values will be added to that slot in all existing Edit Configurations on the destination Megaplex.

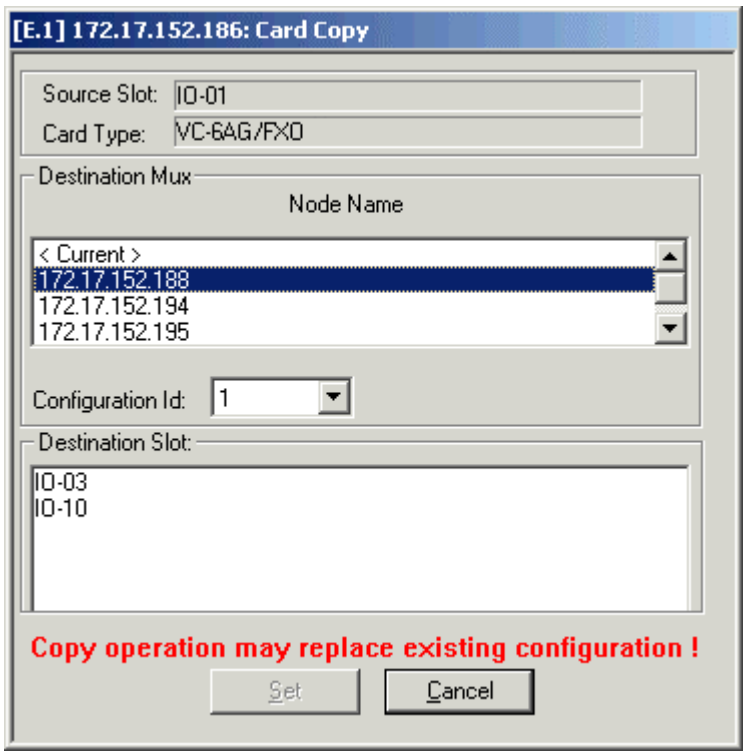


Figure 1-46. Copy Card Dialog Box

Table 1-23. Card Copy Parameters

Parameter	Possible Values / Remarks
Source Slot	Slot in which the selected card is inserted
Card Type	Type of the selected card
Node Name	List of Megaplexes in the current node.
	If the current Megaplex is MP-2100 or MP-2104, you can select only MP-2100 or MP-2104 as a destination

Parameter	Possible Values / Remarks
Configuration Id	ID number of an existing Edit Configuration in the destination Megaplex
Destination Slot	Destination slot in the destination Megaplex. Only empty slots or slots containing the same card type as the source card are available. ***Note:*** *You can select more than one destination slot by using standard Windows item selection methods (click<**CTRL**>click, click<**SHIFT**>click). Each destination slot will receive the same configuration.* A destination slot may contain data that affects or depends on data of other slots (for example, redundant MTML cards, LS-6 tandem cards, and so on). These conditions are not checked or processed further by ***RADview***. You are responsible for checking and correcting such conditions.

Removing a Card

The **Remove** command deletes a card configuration from the selected slot in the Edit Configuration mode. If the card configuration exists in the same slot in other Edit Configurations of the current Megaplex, the card configuration will be removed from all.

➤ **To remove a card from the Edit Configuration:**

1. Click the card you want to remove.
2. From the **Configuration** menu, select **Remove**.

   A dialog box appears asking you to confirm the Remove operation.
3. Click <**OK**> to confirm.

1.5 Port Level Configuration Operations

RADview allows you to perform network management in the Port Level. You select a port by clicking it in the zoomed card view.

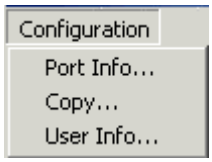
Table 1-24 lists the different management options for port level.

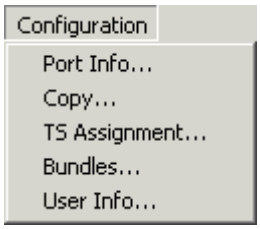
Note

Port Level Configuration menu options are dependent upon the selected port. The contents of the Configuration menu of the zoomed card depend on the port selection:
If the selected port is serial, voice, TDM-IO, etc., only the Port Info and Copy options are available (not applicable for MTML).
If the selected port is TDM-ML (external-1 port of MTML), the Port Info..., Copy, TS Assignment and User Name options are available.

Table 1-24. Port Level Management Options

Tasks – Configuration	Dialog Box and Parameter Location	Path
Setting port information	Software Configuration dialog box (*Figure 1-47*)	Configuration ➥Port Info…
Setting User Name and Information	Port User Info dialog box (*Figure 1-56*)	Configuration ➥User Info…
Configuring Bundles	Bundles Dialog Box (*Figure 1-52*)	Configuration ➥Bundles…
Setting Time Slots	Time Slots table (*Figure 1-57*)	Configuration ➥TS Assignment…





Setting Port Information

The Port Info command displays software configuration information about the selected port.

➤ **To display information about a port:**

- In the Card View, double click the port. Alternatively, in Card View select the port and from the **Configuration** menu, select **Port Info** or click the **Port Info** button .

  The Port Information dialog box appears.

General information and software configuration information can be displayed by selecting the various tabs. RADview supports several types of cards.

The Port Information dialog box contains the following read-only parameters at the top: Slot, Port and Card Type.

Configuring Port Information Parameters

Main Link Cards

Note

ML (Main Link) cards work in conjunction with common logic cards.
***ML-1 cards** (MTML-1/T1 DSU, MTML-1/T1 CSU, MTML-F/T1, MTML-1/E1 DSU, MTML-1/E1 LTU, MTML-F/E1) **work with CL-1** (CL-1, CL-1 ETH) cards and are supported by Megaplex **software versions 6.09 and below**.*
***ML-2 cards** (MTML-2/T1, MTML-2/E1) **work with CL-2** (CL-2, CL-2 ETH) cards and are supported by Megaplex **software versions ≥6.30**.*

Megaplex 2100 supports the following ML cards:

Card	Parameters
ML-2	
MTML-2/T1	see *MTML-2/T1 Cards*
MTML-2/E1	see *MTML-2/E1 cards*
ML–IP	see *ML-IP Cards*

MTML-2/T1 Cards

Megaplex 2100 supports the MTML-2/T1 card.

Note ***ML-2 cards*** *(MTML-2/T1, MTML-2/E1)* ***work with CL-2*** *(CL-2, CL-2 ETH) cards and are supported by Megaplex* ***software versions ≥6.30****.*

MTML-2/T1 Software Configuration Parameters

➤ **To display/change software configuration parameters for an MTML-2/T1 external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...**

   The Port Information dialog box appears (*Figure 1-47*).
3. Click the SW Cfg>> tab.

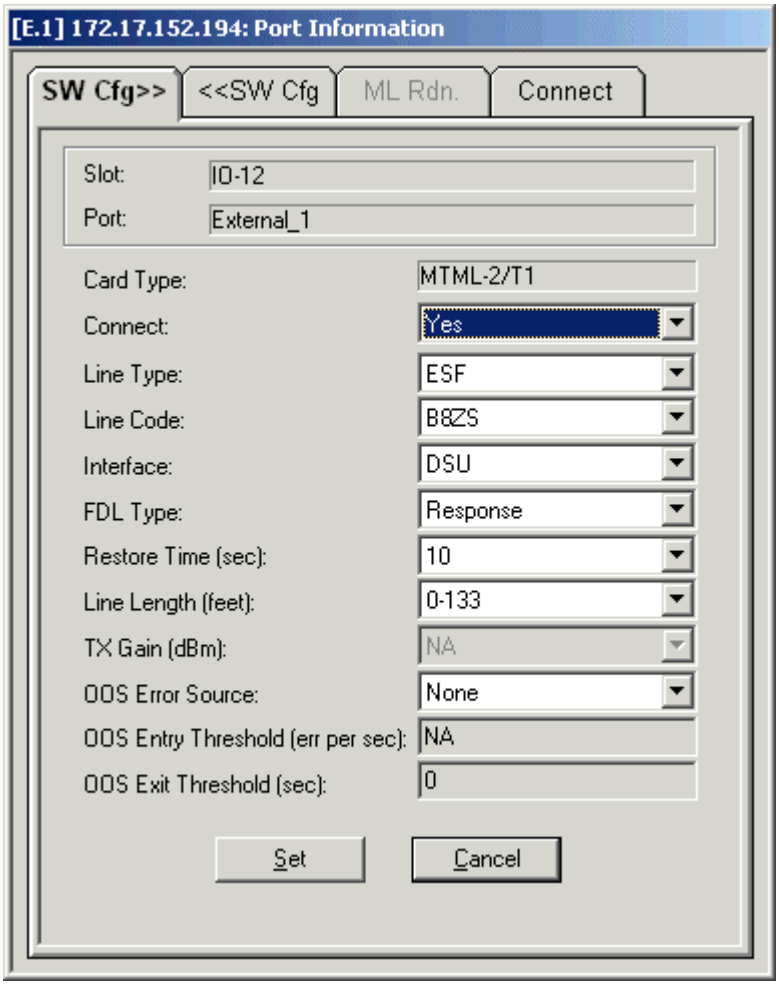


Figure 1-47. SW Cfg>> Tab – MTML-2/T1

Table 1-25. SW Cfg>> Tab MTML–2/T1

Parameter	Possible Values / Remarks
Connect	Indicates whether the port should be considered in any of the Megaplex algorithms **No, Yes**
Line Type	**ESF, D4 (SF)**
Line Code	The line code parameter of the interface **B8ZS**, **B7**, **TRANS**
Interface	Interface type **DSU, CSU**
FDL Type	The side of the FDL that the selected port is located. **Response** indicates user side, **Command** indicates PTT side
Restore Time (sec)	The time required to restore normal service after the end of a loss of synchronization condition **1, 10**

Parameter	Possible Values / Remarks
Line Length	The line length (only for T1/DSU interfaces) **0–133**, **134–266**, **267–399**, **400–533, 534–655**
TX Gain (dBm)	Attenuation value that brings the signal level closer to the expected repeater signal level on the cable (only applicable for T1 CSU cards) **0**, **7.5**, **15.0**, **22.5**

<<SW Cfg Tab

Table 1-26. <<SW Cfg Tab MTML2/T1

Parameter	Possible Values / Remarks
Signaling Profile	**1,2,3,4,5**
Idle Code (hex)	Hexadecimal code transmitted to fill idle (unused) time slots in frames transmitted through the selected port **0** to **FF** The following values are not allowed: 0, 8, 10, 12, 21, 24, 42, 49, 84, 92
CGA	Method used to signal the carrier group alarm (CGA) state to the other end of the selected link **None** - Non-transparent mode. When one of the links is in out-of-service state, the time slots carry the appropriate out-of-service code (data/voice OOS) to the other end of the link. **Trans** - When one of the links is in out-of-service state, the time slots carry the appropriate OOS code to the other end of the link. Signaling bits A and B are not forced into the OOS state. **Full** - Fully transparent mode. When one of the links is in out-of-service state, the state of the time slots and the state of the signaling bits does not change.
Rx Gain	**Short Haul, Long Haul**
OOS Signal	State of the signaling bits when the link is in out-of-service (OOS) state **Forced Idle** - Signaling bits A and B are idle when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also idle. **Forced Busy** - Signaling bits A and B are busy when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also busy. **Busy Idle** - Signaling bits A and B are busy for 2.5 seconds, then become idle until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are idle for 2.5 seconds before switching to busy state. **Idle Busy** - Signaling bits A and B are idle for 2.5 seconds, then become busy until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are busy for 2.5 seconds before switching to idle state.
Voice OOS (hex)	Voice out-of-service code transmitted on voice time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box. **00**-**FF** (hexadecimal)
Data OOS (hex)	Data out-of-service code transmitted on data time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box **00**-**FF** (hexadecimal

Parameter	Possible Values / Remarks
Inband Mng	Identifier of inband management over the link **Off**, **FDL or TS0, Dedicated TS, Dedicated TS/PPP, Dedicated FR**
Inband Mng Rate (Kbps)	Data rate of the inband management. Options depend on Inband Mng **NA, 4, 64**
Inband Mng Rout Protocol	Protocol of Inband Mng. Options depend on Inband Mng **None, RIP2, Proprietary**
Inband Mng	Identifier of inband management over the link. **Off**, **FDL or TS0, Dedicated TS, Dedicated TS/PPP, Dedicated FR**.
Inband Mng Rate (Kbps)	Data rate of the inband management. Options depend on Inband Mng . **NA, 4, 64.**
Inband Mng Rout Protocol	Protocol of Inband Mng. Options depend on Inband Mng. **None, RIP2, Proprietary**.

ML Rdn Tab

Table 1-27. ML Rdn. Tab MTML2/T1

Parameter	Possible Values / Remarks
Redundancy Mode	ML redundancy mode **Dual Cable Parallel Tx:** ML card is connected by a separate cable to other Megaplexes. **Y Cable**: Y Cable connects two MTML cards to two Megaplexes, through one cable (only applicable for same types CSU or DSU of MTML cards).
Primary Port	Primary Port
Secondary Slot	Secondary Slot
Secondary Port	Secondary Port
Recovery Time (sec)	Minimum interval in seconds necessary to pass from time MTML card is switched (to current slot) before next ML switch can occur. **1..99**

Connect Tab

Table 1-28. ML Rdn. Tab MTML2/T1

Parameter	Possible Values / Remarks
Mediation	Enables time slot connection within the current Megaplex or to another Megaplex in the net **Direct (Full)** - Time slot connection within the current Megaplex **Fractional -** Time slot connection to another Megaplex in the net
Connection	The connection group parameters are enabled only when Mediation=Direct
Connect Type	Type of connection: **TDM Service, TDM User**
Connect Mux	Megaplex in the net which is connected to the selected port
Connect Slot	Slot in the connected Megaplex that is connected to the selected port

Connect Port	Port in the connected Megaplex that is connected to the selected port

MTML-2/E1 cards

Megaplex 2100 supports the MTML-2/E1 card.

Note ***ML-2 cards*** *(MTML-2/T1, MTML-2/E1)* ***work with CL-2*** *(CL-2, CL-2 ETH) cards and are supported by Megaplex* ***software versions ≥6.30****.*

➤ **To display/change software configuration parameters for an MTML-2/E1 external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...**
   The Port Information dialog box appears (*Figure 1-48*).
3. Click the SW Cfg>> tab.

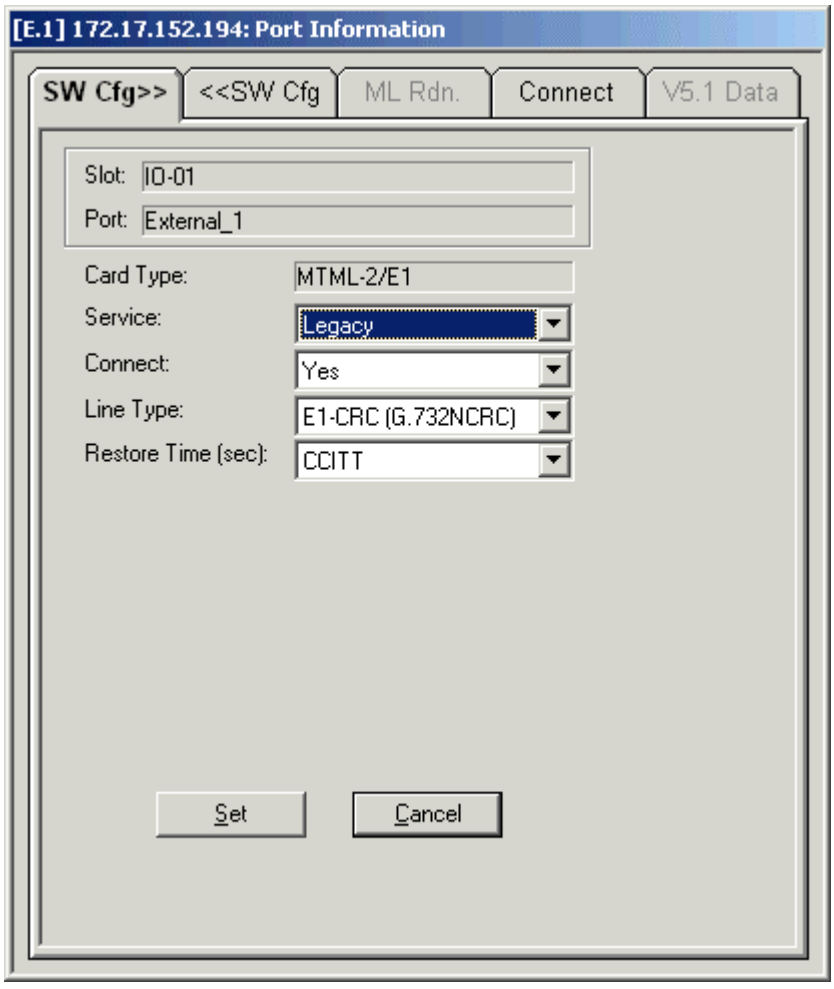


Figure 1-48. SW Cfg >> Tab MTML2/E1

Table 1-29. SW Cfg>> Tab MTML2/E1

Parameter	Possible Values / Remarks
Connect	Indicates whether the port should be considered in any of the Megaplex algorithms **No, Yes**
Line Type	The line type of the interface **E1-MF (G.732S), E1 (G.732N), E1-CRC (G.732NCRC), E1-CRC-MF (G.732SCRC)**
Restore Time (sec)	The time required to restore normal service after the end of a loss of synchronization condition: **CCITT, 1, 10**

<<SW Cfg Tab

Table 1-30. <<SW Cfg Tab MTML2/E1

Parameter	Possible Values / Remarks
Idle Code (hex)	Hexadecimal code transmitted to fill idle (unused) time slots in frames transmitted through the selected port: **0** to **FF** The following values are not allowed: 0, 8, 10, 12, 21, 24, 42, 49, 84, 92
Inband Mng	Identifier of inband management over the link **Off**, **FDL or TS0, Dedicated TS, Dedicated TS/PPP, Dedicated FR**
Inband Mng Rate (Kbps)	Data rate of the inband management. Options depend on Inband Mng **8, 16, 32, 64**
Inband Mng Rout Protocol	Protocol of Inband Mng For Inband Mng =Dedicated TS/PPP or Dedicated FR: **None, RIP2, Proprietary**

ML Rdn Tab

Table 1-31. ML Rdn. Tab MTML2/E1

Parameter	Possible Values / Remarks
Redundancy Mode	ML redundancy mode **Dual Cable Parallel Tx:** ML card is connected by a separate cable to other Megaplexes **Y Cable**: Y Cable connects two MTML cards to two Megaplexes, through one cable (only applicable for same types CSU or DSU of MTML cards)
Primary Port	Primary Port
Secondary Slot	Secondary Slot
Secondary Port	Secondary Port

Parameter	Possible Values / Remarks
Recovery Time (sec)	Minimum interval in seconds necessary to pass from time MTML card is switched (to current slot) before next ML switch can occur: **1..99**

Connect Tab

Table 1-32. ML Rdn. Tab MTML2/E1

Parameter	Possible Values / Remarks
Mediation	Enables time slot connection within the current Megaplex or to another Megaplex in the net **Direct (Full)** - Time slot connection within the current Megaplex **Fractional -** Time slot connection to another Megaplex in the net.
Connection	The connection group parameters are enabled only when Mediation=Direct
Connect Type	Type of connection **TDM Service, TDM User**
Connect Mux	Megaplex in the net which is connected to the selected port
Connect Slot	Slot in the connected Megaplex that is connected to the selected port
Connect Port	Port in the connected Megaplex that is connected to the selected port

MTML-2/E1 V5.1 Parameters

➤ **To configure V.51 data parameters for an MTML-2/E1 external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...**
   The Port Information dialog box appears (*Figure 1-49*).
3. Click the V5.1 tab.

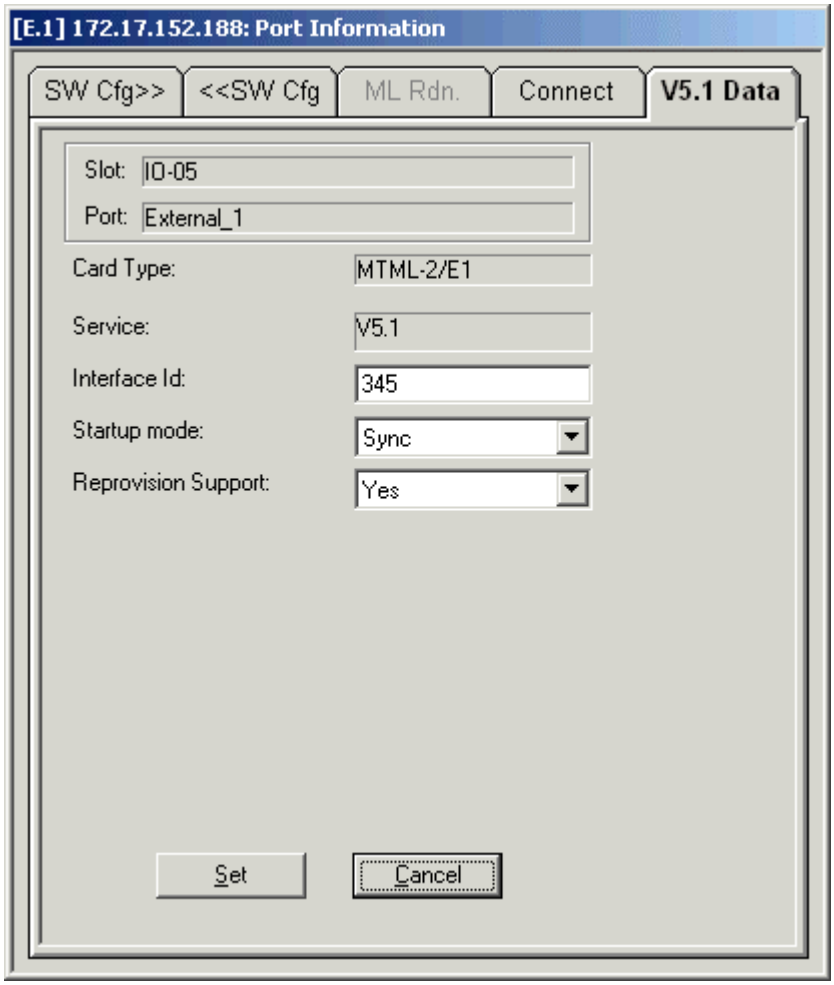


Figure 1-49. V5.1 Data - MTML2/E1

Table 1-33. V5.1 Data Parameters – MTML-2/E1

Parameter	Possible Values / Remarks
Service	V5.1
Interface ID	V5.1 Interface ID **00000000..16777215**
Startup Mode	Startup Mode **Sync, Async**
Reprovision Support	Reprovision Support **No**: reprovision is not supported **Yes**: reprovision is supported

ML-IP Cards

Megaplex 2100/2104 supports the ML-IP card. The port information parameters for the ML–IP are different for internal and external ports.

Note *ML–IP cards are supported for Agent SW Versions ≥8.xx.*

ML-IP Software Configuration Parameters

➤ **To display/change software configuration parameters for an ML-IP external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...**

   The Port Information dialog box appears (*Figure 1-50*).
3. Click the SW Cfg tab.

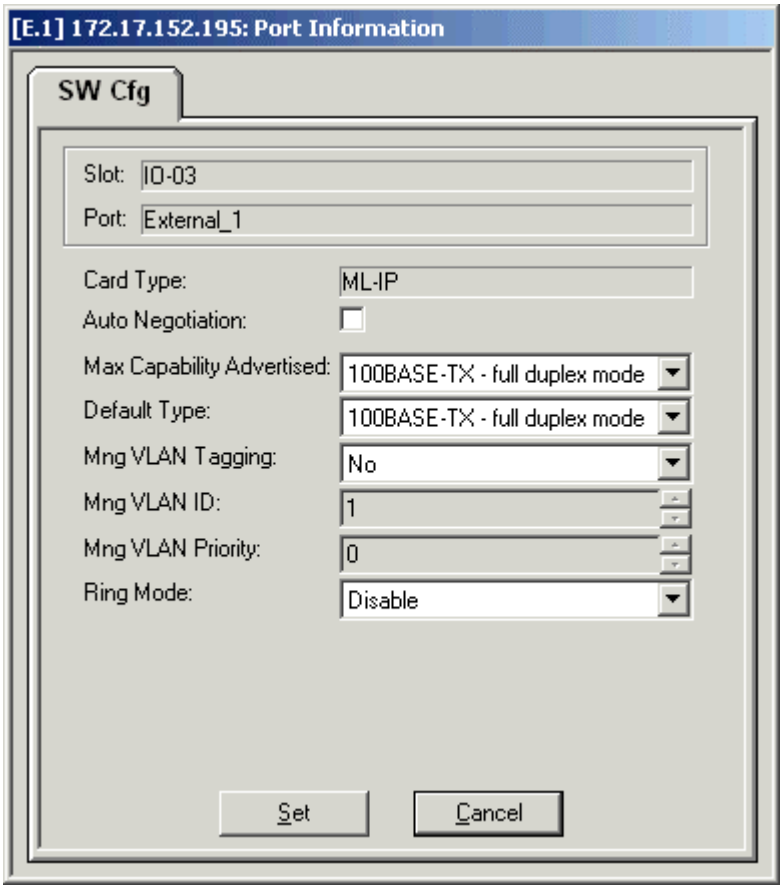


Figure 1-50. Software Configuration ML–IP (Ext. Port)

Table 1-34. Software Configuration –ML–IP (External Port)

Parameter	Possible Values / Remarks
Auto Negotiation	**Enable** (checked), **Disable** (unchecked)
Max Capability Advertised	Defines the maximum capabilities of the interface Only applicable when Auto Negotiation is enabled (checked) **10BASE-T half duplex mode** **10BASE-T full duplex mode** **100BASE-TX half duplex mode** **100BASE-TX full duplex mode**
Default Type	Only applicable when Auto Negotiation is disabled 10BASE-T half duplex mode 10BASE-T full duplex mode 10BASE-TX half duplex mode 10BASE-TX full duplex mode
Mng VLAN Tagging	Enable VLAN tagging **Yes**, **No**
Mng VLAN ID	VLAN ID **1..4000** This field exist only when Mng VLAN Tagging is Yes. This field does not exist for external–3 port.
Mng VLAN Priority	**0..7** This field exist only when Mng VLAN Tagging is Yes. This field does not exist for external–3 port.
Ring Mode	Indicates If Ring Mode is enabled or not **Checked** (enabled), **Unchecked** (disabled)

➤ **To display/change software configuration parameters for an ML-IP internal port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...**

   The Port Information dialog box appears (*Figure 1-51*).
3. Click the SW Cfg tab.

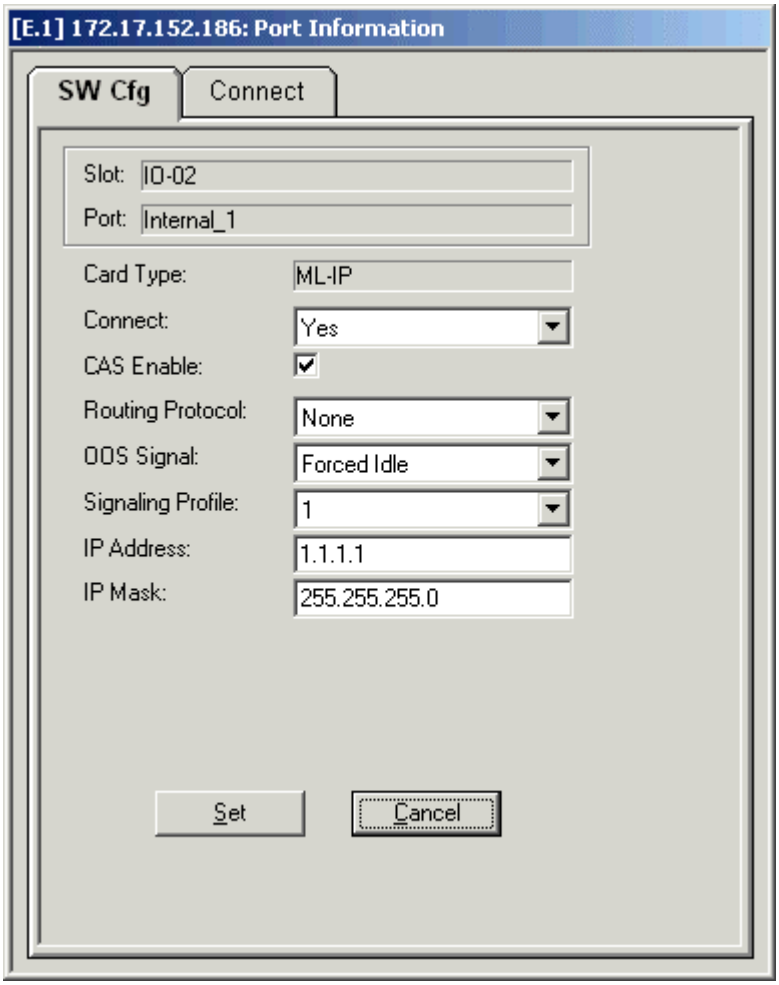


Figure 1-51. Software Configuration ML–IP (Int. Port)

Table 1-35. Software Configuration –ML–IP (Internal Port)

Parameter	Possible Values / Remarks
Connect	**No**, **Yes**
CAS Enable	Enables CAS **Enable** (checked), **Disable** (unchecked)
Routing Protocol	**None**, **RIP2**, **Proprietary RIP**

Parameter	Possible Values / Remarks
OOS Signal	State of the signaling bits when the link is in out-of-service (OOS) state: **Forced Idle** – Signaling bits A and B are idle when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also idle. **Forced Busy** - Signaling bits A and B are busy when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also busy. **Busy Idle** - Signaling bits A and B are busy for 2.5 seconds, then become idle until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are idle for 2.5 seconds before switching to busy state. **Idle Busy** - Signaling bits A and B are idle for 2.5 seconds, then become busy until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are busy for 2.5 seconds before switching to idle state.
Signaling Profile	**1**, **2**, **3**, **4**, **5**
IP Address	IP Address
IP Mask	IP Mask
Echo Canceller	**Off**, **On**

➤ **To display bundle parameters for an ML-IP internal port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Bundles...**
   The Bundles dialog box appears.

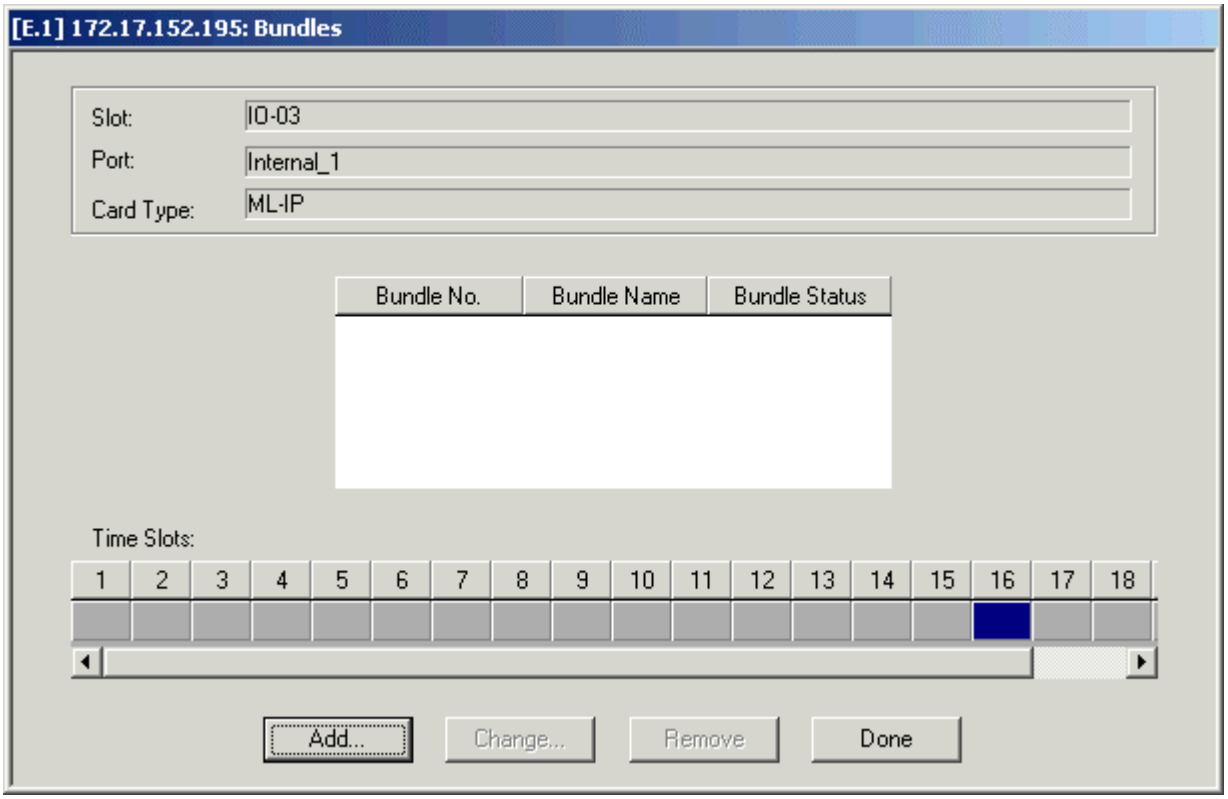


Figure 1-52. Bundles Dialog Box– ML–IP (Int. Port)

➤ **To add bundle parameters for an ML-IP internal port:**

1. From the **Bundles** dialog box, click **<Add...>**
   The Add Bundle dialog box appears.

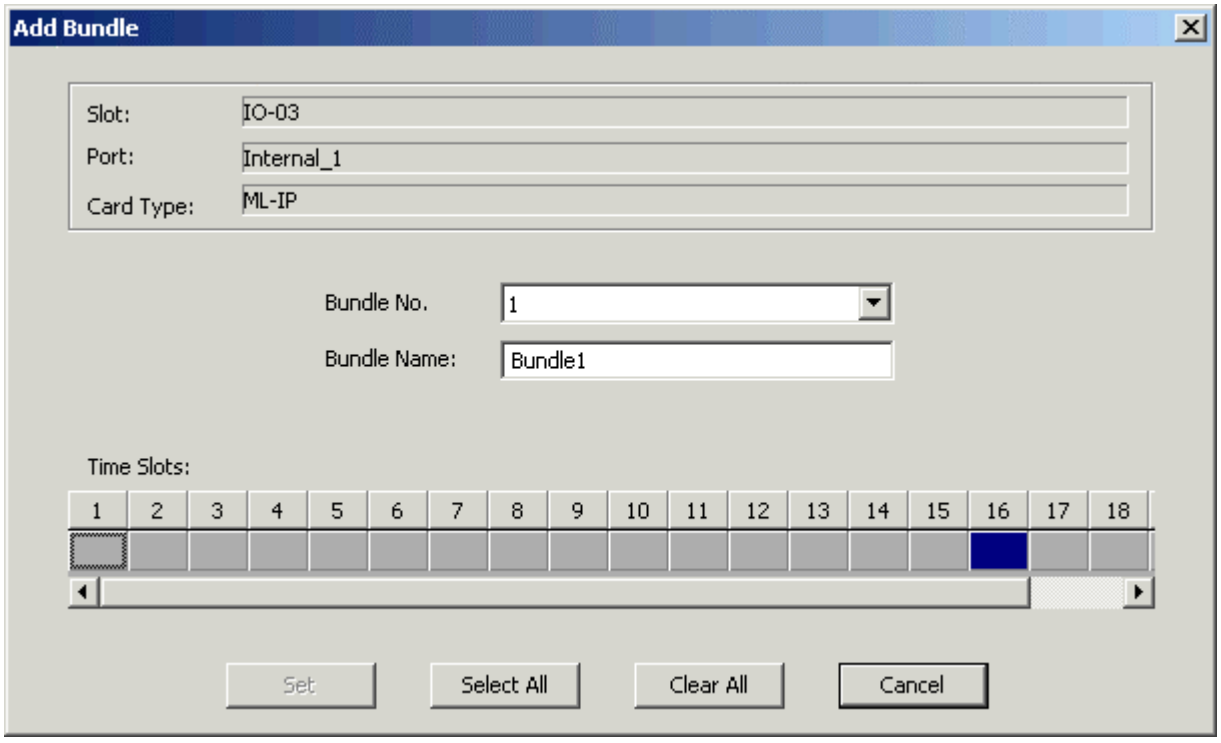


Figure 1-53. Add Bundle ML–IP (Int. Port)

2. Configure **Bundle No., Bundle Name** and **Time Slots**.
3. Click <**Set**>.

➤ **To change bundle parameters for an ML-IP internal port:**

1. From the **Bundles** dialog box, select an entry from the list and click <**Change...**>

   The Change Bundle dialog box appears.
2. Configure **Bundle No., Bundle Name** and **Time Slots**.
3. Click <**Set**>.

➤ **To remove bundle parameters for an ML-IP internal port:**

- From the **Bundles** dialog box, select an entry from the list and click <**Remove...**>

  The Bundle is deleted from the list.

VC Cards

Note When Encoding Mode=ADPCM, each port uses 1/2 TS. You must use two adjacent/successive channels when using TSA with 'Encoding Mode' = ADPCM (you can connect BOTH ports of a pair or disconnect BOTH). In this case, you must connect 2 ports (of a pair: 1-2, 3-4, 5-6) together.

VC Software Configuration Parameters

➤ **To configure software configuration parameters for a VC external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...**

   The Port Information dialog box appears (*Figure 1-54*).
3. Click the SW Cfg>> tab.

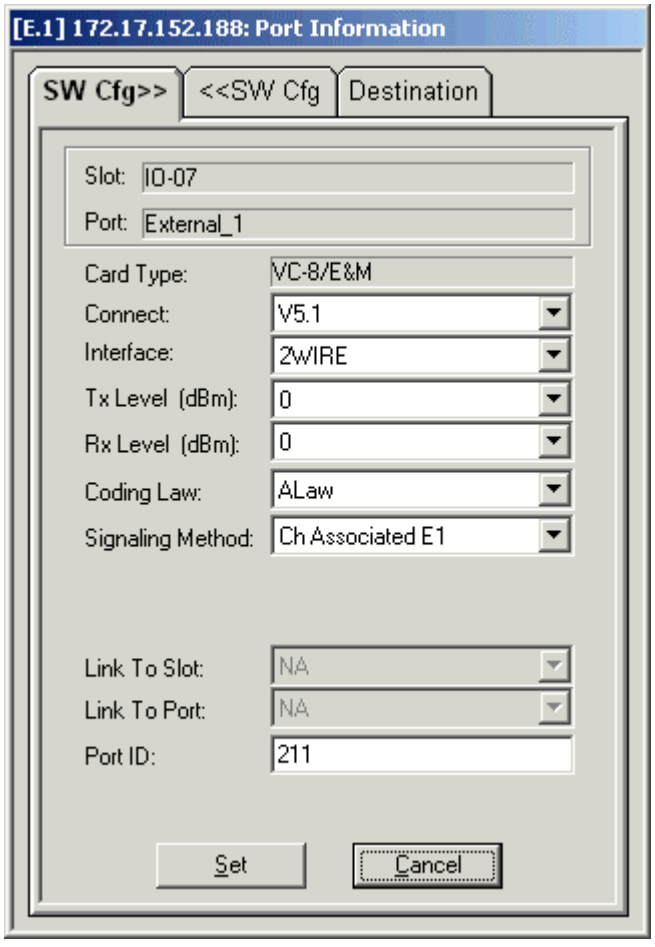


Figure 1-54. Software Configuration – VC Cards

Table 1-36. Software Configuration Parameters – VC Cards

Parameter	Possible Values / Remarks
Connect	Indicates whether the port should be considered in any of the Megaplex algorithms **No, Yes**
Interface	For E&M, MTVC-2, VC-16A cards: **2WIRE, 4WIRE** For others: 2WIRE ***Note**: Interface is the same for all card ports except for VC-8, VC-16 and VC-16A cards where it can be different for each port.*
Tx Level (dBm)	Transmit level in steps of 1 or 0.5 dBm **–17..8** ***Note**: Tx Level value can be offset by a certain value if Offset 1 is selected in the System Information dialog box (Figure 1-6).*
Rx Level (dBm)	Receive level in steps of 1 or 0.5 dBm **–23..2** ***Note**: The Rx Level value can be offset by a certain value if Offset 1 is selected in the System Information dialog box (Figure 1-6).*
Coding Law	**Alaw, Ulaw** ***Note:** Coding Law is the same for all card ports.*
Signaling Method	**No Signaling, RobbedBitMultiFrame, RobbedBitFrame, Ch Associated E1** ***Note:** Options vary depending on card. Signaling Method is the same for all card ports. It does not exist for MTVC-2 cards.*
Signaling Profile	**1, 2, 3, 3 Reverse-Polarity, 3 Metering–Pulse, 4,** **NA (when Signaling Method=No Signaling)** ***Note:** Only for VC-6 family cards. Options vary depending on card. Signaling Profile is the same for all card ports.*
Encoding Mode	**PCM, ADPCM** ***Note:** Only for VC-6A family, VC-8, VC-16, VC-16A cards. Encoding Mode is the same for all card ports. ADPCM is currently not supported by VC-8, VC-16 E&M, FXO, FXS cards. For VC–6A, VC–6AG TSA, when Encoding Mode=ADPCM, each port uses 1/2 TS. You must use two adjacent/successive channels when using TSA with 'Encoding Mode' = ADPCM (you can connect BOTH ports of a pair or disconnect BOTH). In this case, you must connect 2 ports (of a pair: 1-2, 3-4, 5-6) together.*

Parameter	Possible Values / Remarks
Analog Signaling	For VC-6A cards: **Loop–Start** For VC-6AG cards (same for all card ports): **Loop–Start** For VC-8 (same for all card ports): **Loop–Start,** Wink Start VC-16 cards (same for every adjacent 8 ports): **Loop–Start, Ground–Start, Wink Start**
Meter Rate	For VC-6A/FXO, VC-6A/FXS cards: When Signaling Profile=3, 3 Metering Pulse: **16, 12** else **NA** For VC-8/FXO, VC-8/FXS, VC-16/FXO, VC-16/FXS cards: **16, 12** ***Note:*** *Meter Rate is the same for all card ports. Some versions of VC–8/FXO, VC–16/FXO cards do not support Meter Rate. An alarm is issued if 12 or 16 is selected.*
E&M Type	For VC-8/E&M, VC-16/E&M cards: **Type 1, Type 2, Type 3, SSDC5** ***Note:*** *E&M Type is the same for every 4 adjacent ports (1..4, 5..8, 9..12, 13..16).*
Signaling Feedback	For VC-8/FXO, VC-16/FXO cards: **No, Yes** ***Note:*** *Signaling Feedback is the same for every 8 adjacent ports (1..8, 9..16).*
Remote Type	Only for VC-6A/4LB cards **LB, PBX**
Conversation Time (min)	Only for VC-6A/4LB cards **2, 3, 5, Unlimited**
Link To Slot	**IO-1..IO-12, NA** ***Note****: Only slots containing ML cards are available for selection*
Link To Port	**External-1..External-2, Internal-1, NA** (when Link to Slot=NA)
Port ID	***Port ID*** ***Note:*** *Exists only for cards that support V5.1. Enabled only when Connect=V.5.1.*

VC-6 Destination Parameters

Table 1-37. Destination Parameters – VC–6

Parameter	Possible Values / Remarks
Dest Connect	**No, Yes**
Dest Mux	Mux ID Enter an internal ID number for Mux, nor IP address or Mux name
Dest Slot	Destination Slot **Unknown, IO-1.. IO-15**
Dest Port	Destination Port **Unknown, External-1.. External-12, Internal-1..Internal-12**

Parameter	Possible Values / Remarks
Dest Timeslot	Destination Timeslot (applicable only when card in Dest Slot is of type ML) **--, 1..31 (E1), 1..24 (T1)**

Copying a Port Configuration

The Copy command allows you to copy the selected port's configuration to a destination port within the current Megaplex or another Megaplex.

➤ **To copy a port configuration to another port:**

1. In the Edit Configuration Card View, click the port whose configuration you want to copy.
2. From the **Configuration** menu, select **Copy**.

   The Port Copy dialog box appears.
3. Select the required copy parameters and click <**Set**>.

   The source configuration is copied to its destination(s).

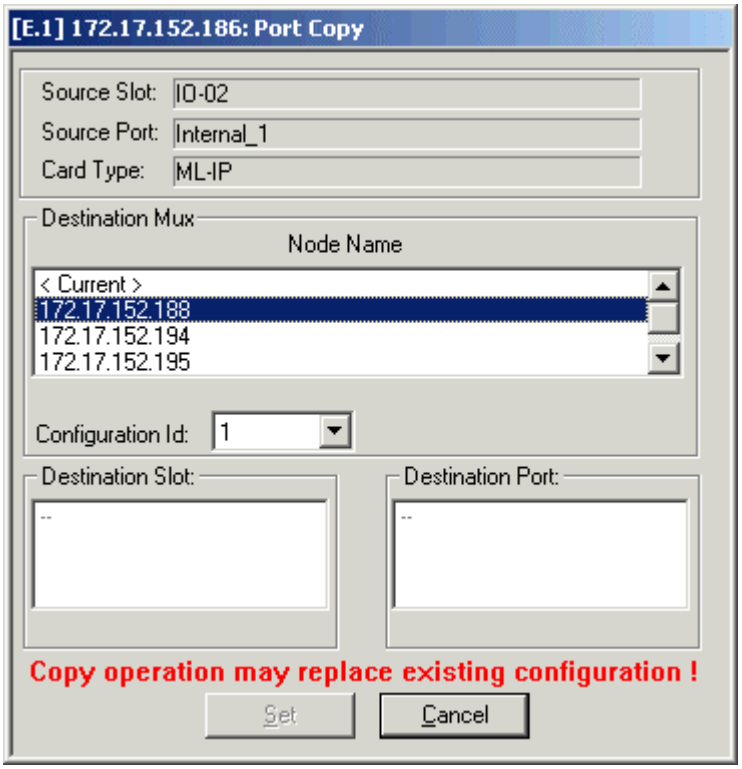


Figure 1-55. Port Copy Dialog Box

Table 1-38. Port Copy Parameters

Parameter	Possible Values / Remarks
Source Slot	Slot in which the selected card is inserted
Source Port	Number of the selected port
Card Type	Type of the selected card
Node Name	List of Megaplexes in the current net. You can select any type of Megaplex as a destination
Configuration Id	ID number of an existing Edit Configuration in the destination Megaplex
Destination Slot	Destination slot in the destination Megaplex. Only slots containing the same card type as the source card are available. ***Note:*** *You can select more than one destination slot. Each destination slot will receive the same configuration.*
Destination Port	Destination port in the destination slot ***Note:*** *A destination port may contain data that affects or depends on data of other ports (for example, redundant MTML cards, LS-6 tandem cards, and so on). These conditions are not by checked or processed further by RADview. The user is responsible for checking and correcting such situations.*

Setting User Info

The **User Info** command enables the user to assign user information for a port.

➤ **To change port information parameters:**

- In the **Card View**, select a port and from the **Configuration** menu, select **User Info…**

The Port User Info dialog box appears.

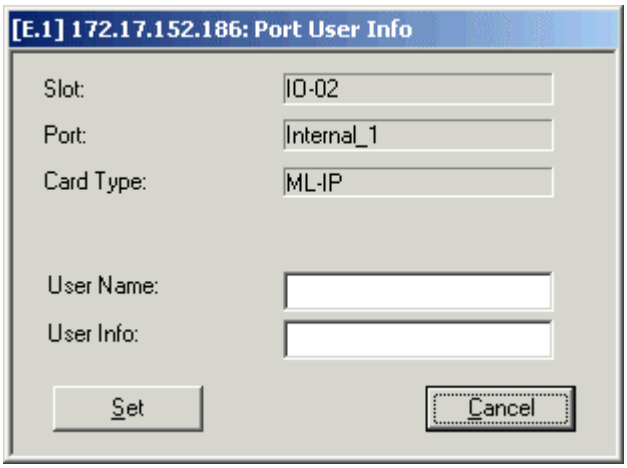


Figure 1-56. Port User Info Dialog Box

Table 1-39. Port User Info Parameters

Parameter	Possible Values / Remarks
Slot	Slot in which the card is located
Port	Selected port
Card Type	Card type
User Name	User supplied name whose maximum length is 15 characters
User Info	User supplied information whose maximum length is 70 characters

Setting Time-Slot Assignments

Use the TS Assignment command to display and set time slot assignments for a specific port.

Notes

1. *TS Assignment is only available for external ports of MTML cards.*
2. *HSH cards can be connected only to MTML or ML-IP cards.*
3. *Since HSH cards can only be connected to MTML cards they are not considered ML cards. Therefore, their slot will not be selected for the Link to Slot field.*
4. *If the internal port of an HSH card is selected, the Slot field only shows slots that contain ML cards. The Split option is NOT selectable.*

➤ **To set time-slot assignments**

1. In the **Edit Configuration Card View**, click the required external-1 port.
2. From the **Configuration** menu, select **TS Assignment** or click the **TS Assignment** button

   The Time Slots Table appears.

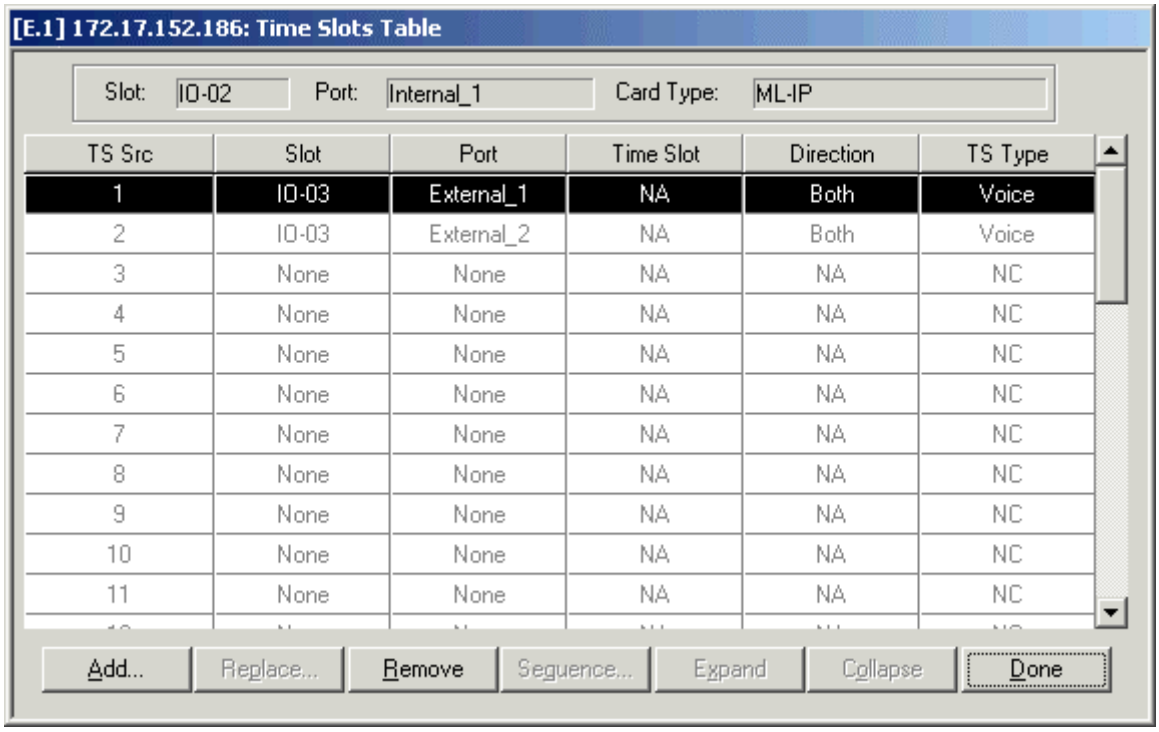


Figure 1-57. Time Slots Table

Note *All parameters in the Time Slots Table are read-only.*

Table 1-40. Time Slots Parameters

Parameter	Possible Values / Remarks
Slot	Slot in which the selected card is inserted **IO-1** to **IO-12**
Card Type	Type of the selected card All **MTML** cards
Port	Number of the selected port **external-1**, **external-2**
TS Src	Index number of the selected time slot T1 link: **1..24** E1 link: **1..31**
Slot	Destination card slot in the current MP-2100 **None**, **IO-1..IO-12**, **Split**
Port	Destination port in the destination slot. Options depend on the available ports on the installed IO card **None**, **NA**, **external-1..external-12**, **Internal-1..Internal-13**
Time Slot	Destination time slot for the selected time slot in the current Megaplex. This parameter is relevant if the destination slot contains an MTML card. Assigned time slots are checked during sanity checks T1 link – **None**, **1..24** E1 link – **None**, **1..31**

Parameter	Possible Values / Remarks
Direction	**NA**, **Tx**, **Rx**, **Both**, **BcastSrc**, **BcastDst** ***Note:*** *To remove Bi-directional Bypass between 2 ML ports (Direction=Both), you need to remove both entries (one for each port).* *To change the Bypass to Unidirectional, you need to change the direction of one ML port and other ML port TS connections from Both to Rx.*
TS Type	**NC**, **Data**, **Voice**, **Mng**

Note *If you configure Time Slot Assignment between two MTML cards/Ports with Direction=Both, and decide to change/remove that Time Slot Assignment, it must be done for both MTML cards.*

➤ **To change the default entry of the Source TS or Bit (not connected):**

- In the Time Slots Table, select an entry in the table and click <**Replace...**>

The Replace TS dialog box appears.

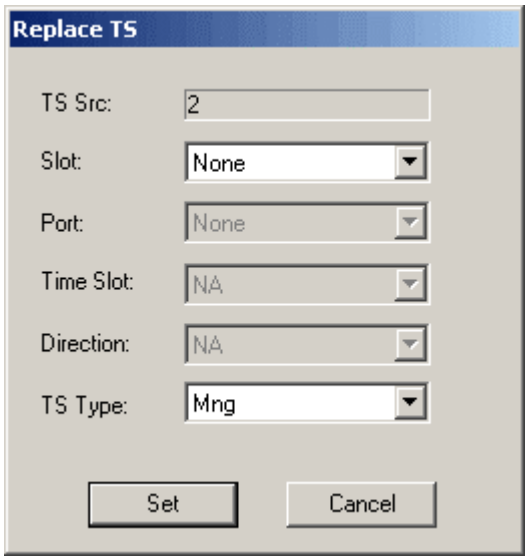


Figure 1-58. Replace TS Dialog Box

Table 1-41. Replace TS Parameters

Parameter	Possible Values / Remarks
TS Src	Index number of the selected time slot. This parameter is read-only T1 link: **1..24** E1 link: **1..31**
Slot	Destination card slot in the current MP-2100. Options depend on the type of the selected port **None**, **IO-1..IO-12**, **Split**.

Parameter	Possible Values / Remarks
Port	Destination port in the destination slot. Options depend on the available ports on the installed IO card **None**, **NA**, **external-1..external-12**, **Internal-1..Internal-13**
Time Slot	Destination time slot for the selected time slot in the current Megaplex. This parameter is relevant if the destination slot contains an MTML card. Assigned time slots are checked during sanity checks. T1 link - **None**, **1..24** E1 link - **None**, **1..31**
Direction	**NA**, **Tx**, **Rx**, **Both**, **BcastSrc**, **BcastDst**
TS Type	**NC**, **Data**, **Voice**, **Mng**

➤ **To add another destination for a TS Source or Bit:**

- In the **Time Slots Table**, select an existing TS entry and click **Add...**

The Add TS dialog box appears.

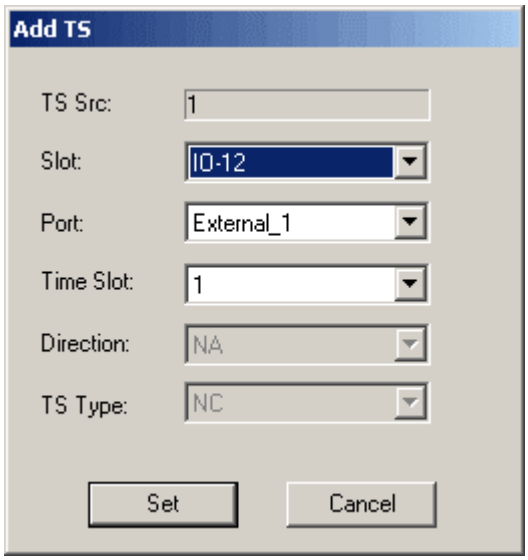


Figure 1-59. Add TS Dialog Box

Table 1-42. Add TS Parameters

Parameter	Possible Values / Remarks
TS Src	Index number of the selected time slot. This parameter is read-only. T1 link: **1..24** E1 link: **1..31**
Slot	Destination card slot in the current MP-2100. Options depend on the type of the selected port. **None**, **IO-1..IO-12**, **Split**
Port	Destination port in the destination slot. Options depend on the available ports on the installed IO card. **None**, **NA**, **external-1..external-12**, **Internal-1..Internal-13**

Parameter	Possible Values / Remarks
Time Slot	Destination time slot for the selected time slot in the current Megaplex. This parameter is relevant if the destination slot contains an MTML card. Assigned time slots are checked during sanity checks. T1 link - **None**, **1..24** E1 link – **None**, **1..31**
Direction	**NA**, **Tx**, **Rx**, **Both**, **BcastSrc**, **BcastDst**
TS Type	**NC**, **Data**, **Voice**, **Mng**

➤ **To Remove a TS**

- In the **Time Slots Table**, select an existing TS assignment and click <**Remove**>.

The TS is removed from the list.

Connecting a Sequence of Time Slots

You can assign a sequence of consecutive time slots from the selected card to a port on another MTML card of the same type (T1/E1). This enables you to save the time otherwise required to assign each time slot separately.

➤ **To assign a sequence of time slots**

- In the **Time Slots Table**, click **Sequence**.

The Sequence TS Assignment dialog box appears.

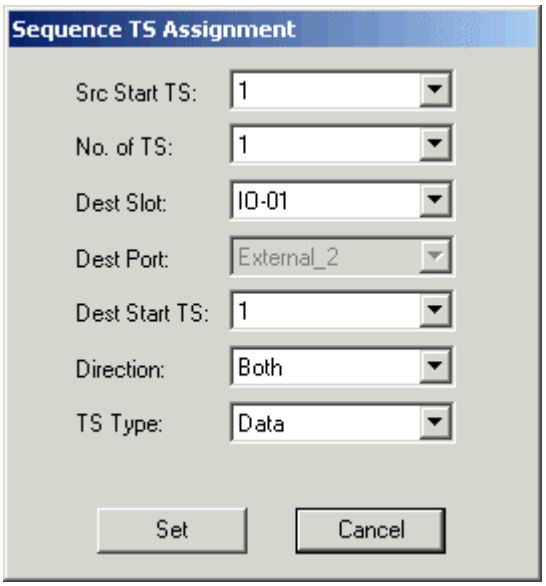


Figure 1-60. Sequence Time Slot Assignment Dialog Box

Table 1-43. Sequence TS Parameters

Parameter	Possible Values / Remarks
Src Start TS	First time slot of the sequence T1 ports: **1..24** E1 ports **1..31**
No. of TS	Number of time slots in the sequence T1 ports: **1..**(***25 -Src Start TS***) E1 ports: For Line Types E1 (G.732N) and E1 - CRC (G.732NCRC) **1..**(***32 - Src Start TS***). For Line Types E1 - MF (G.732S) and E1 - CRC-MF (G.732SCRC) If Src Start ≤ 15 : **1..**(***16 - Src Start TS***). If Src Start ≥ 17 : **1..**(***32 - Src Start TS***). For ML-20 ports: **2..n** **where Y is the lowest of the following** **n=**(**32 -*Src Start TS***) or **(n=Rate/64)**.
Dest Slot	Destination card slot in the current MP-2100 for these time slots **IO-1..IO-12**
Dest Port	Destination port in the destination card slot for these time slots **external-1**, **external-2**, **internal-1**
Dest Start TS	First time slot in the destination port T1 ports: **1..**(***25 - No. of TS***). E1 ports: For Line Types E1 (G.732N) and E1 - CRC (G.732NCRC) **1..**(***32 - No. of TS***). For Line Types E1 - MF (G.732S) and E1 - CRC-MF (G.732SCRC) If Src Start ≤ 15 : **1..**(***16 - Src Start TS***). If Src Start ≥ 17 : **1..**(***32 - Src Start TS***). For ML-20 ports: **1..**(***32 - No. of TS***).
Direction	**Tx**, **Rx**, **Both**, **BcastSrc**, **BcastDst**
TS Type	**NC**, **Data**, **Voice**, **Mng, Spare**

Split Time Slot

In MTML card external ports, the time slots may be split into smaller parts so that different bits are connected to different slots and/or ports. If a time slot is Split, you can expand the table to view the connections of that time slot's bits.

➤ **To view the connections of a split time slot's bits:**

- Click an entry whose slot is Split and click **Expand** or double-click the **TS Src** or **Slot** of an entry whose slot is Split.

  The Time Slots Table displays eight additional rows (one for each bit) directly under the selected time slot.

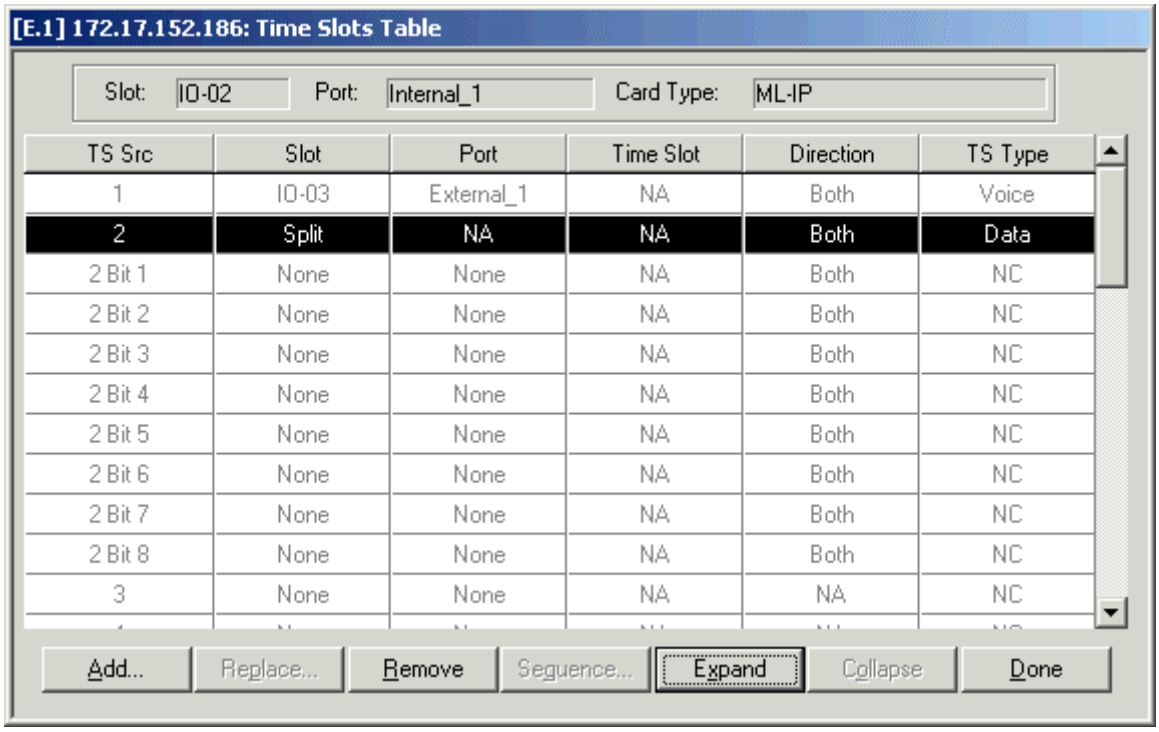

[E.1] 172.17.152.186: Time Slots Table
Slot: IO-02
Port: Internal_1
Card Type: ML-IP
TS Src | Slot | Port | Time Slot | Direction | TS Type
1 | IO-03 | External_1 | NA | Both | Voice
2 | Split | NA | NA | Both | Data
2 Bit 1 | None | None | NA | Both | NC
2 Bit 2 | None | None | NA | Both | NC
2 Bit 3 | None | None | NA | Both | NC
2 Bit 4 | None | None | NA | Both | NC
2 Bit 5 | None | None | NA | Both | NC
2 Bit 6 | None | None | NA | Both | NC
2 Bit 7 | None | None | NA | Both | NC
2 Bit 8 | None | None | NA | Both | NC
3 | None | None | NA | NA | NC
Add... Replace... Remove Sequence... Expand Collapse Done

Figure 1-61. Expanded Time Slots Table

➤ **To Replace a TS at bit level**

1. In the **Expanded Time Slots Table**, select a bit entry and click <**Replace...**>

   The Replace Bit dialog box appears. This box is similar to the Replace TS dialog box.

2. Set parameters for the **Slot** and **Port**.
3. Click <**Set**> to implement changes to the Edit Configuration.

➤ **To Add a TS at bit level**

1. In the **Expanded Time Slots Table**, select a bit entry and click <**Add...**>

   The Add Bit dialog box appears. This box is similar to the Add TS dialog box.

2. Set parameters for the **Slot** and **Port**.
3. Click <**Set**> to implement changes to the Edit Configuration.

➤ **To Remove a TS at bit level**

- In the **Expanded Time Slots Table**, select a bit entry and click <**Remove**>**.**

  The TS is removed from the list.

➤ **To return to the Time Slot Table's normal view:**

- Click a *Bit* entry and click <**Collapse**>.

Chapter 2

Agent Configuration Mode

This section explains the Megaplex management operations that are performed in RADview's Agent mode.

2.1 System Level Agent Operations

In the Agent mode, you can display configuration information for the current Megaplex configuration in the Megaplex, Card and Port Levels. Data accessed in the Agent mode may be used for comparison and analysis when adjusting parameters in the Edit Configuration view.

You can display active alarms and history log for the Megaplex, cards and ports. In addition, you can view and analyze port statistics at the management station from the Agent mode.

Any of the slot positions can be selected. Only correctly installed slot positions can be monitored and zoomed. The Megaplex view displays the rear panel of each of its installed cards, along with the card's name. If a slot is empty, no rear panel is displayed. If an unknown card is installed, the rear panel displays "**?**" (unknown).

If a slot in the agent is incorrectly installed, a red frame surrounds it. If a slot is selected, a light blue frame surrounds it.

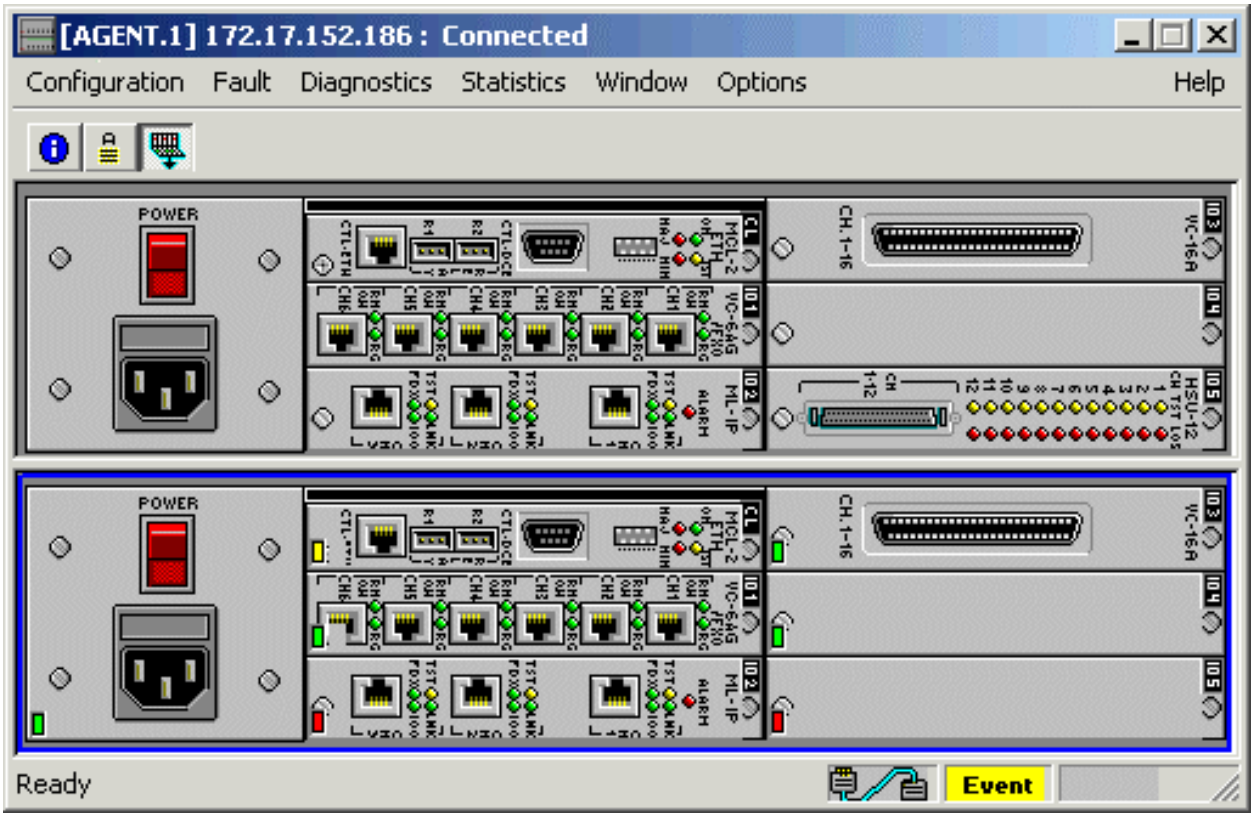


Figure 2-1. Megaplex Level – Agent Mode on Bottom, Edit Configuration Mode on Top

➤ **To select the Agent mode:**

- In the **Megaplex View**, click the hub at the bottom of the window.

Note *If there is no communication between the network management station and the current Megaplex, the Agent mode is disabled and only the Edit Configuration mode appears on the screen.*

➤ **To select the Agent Configuration mode:**

- In the **Megaplex View**, click the border of the bottom hub in the window.

Table 2-1 lists the different management options for the system level.

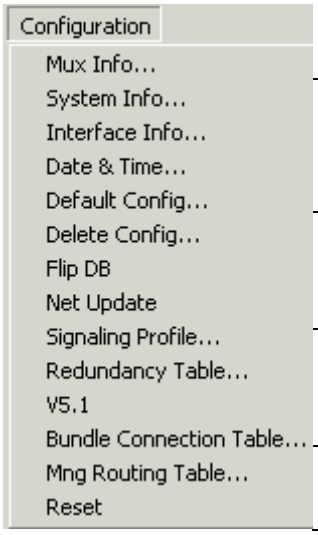
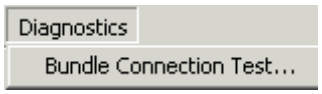


Table 2-1. System Management Options

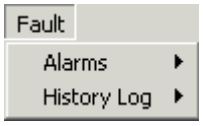
Tasks – Configuration	Dialog Box and Parameter Location	Path
Displaying Mux timing information	Mux Information dialog box (*Figure 2-2*)	Configuration ➥Mux Info…
Displaying system information Setting voice level offset	System Information dialog box (*Figure 2-3*)	Configuration ➥System Info…
Displaying interface information	Interface Information dialog box (*Figure 2-4*)	Configuration ➥Interface Info…
Setting Date & Time	Date and Time Setup dialog box (*Figure 2-5*)	Configuration ➥Date & Time…
Setting default configuration	Default Config dialog box (*Figure 2-6*)	Configuration ➥Default Config…
Deleting an agent configuration	Delete Config dialog box (*Figure 2-7*)	Configuration ➥Delete Config…
Displaying flip DB agenda	Flip DB Agenda dialog box (*Figure 2-9*)	Configuration ➥Flip DB ➥Agenda…
Displaying flip DB net events	Flip DB Net Events dialog box (*Figure 2-10*)	Configuration ➥Flip DB ➥Net Events…
Displaying flip DB decision table	Flip DB Decision table (*Figure 2-12*)	Configuration ➥Flip DB ➥Decision Table…
Setting net update delay	Net Update Delay dialog box (*Figure 2-14*)	Configuration ➥Net Update ➥Delay…
Activating net update	See *Net Update*	Configuration ➥Net Update ➥Activate
Displaying system signaling profiles	Signaling Profile dialog box (*Figure 2-15*)	Configuration ➥ Signaling Profile…
Displaying redundancy parameters	Redundancy Table (*Figure 2-20*)	Configuration ➥Redundancy Table…
Displaying V5.1 Variants	V5.1 Variants dialog box (*Figure 2-21*)	Configuration ➥V5.1 Variants

Displaying Bundle Parameters	Bundle Connection Table (*Figure 2-22*)	Configuration ➥Bundle Connection Table…
Displaying Mng Routing Table	Managers Routing Table (*Figure 2-24*)	Configuration ➥Mng Routing Table…
Resetting the device	See *Resetting the Device*	Configuration ➥Reset…



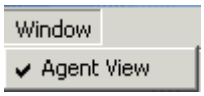
Tasks - Diagnostics	**Dialog Box and Parameter Location**	**Path**
Running diagnostic tests	Bundle Connection Test (*Figure 2-26*)	Diagnostics ➥Bundle Connection Test…

Tasks - Statistics	**Dialog Box and Parameter Location**	**Path**
Viewing statistics	Bundle Connection Statistics Table (*Figure 2-37*)	Statistics ➥Bundle Connection Statistics…

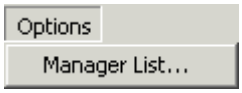


Tasks - Fault	**Dialog Box and Parameter Location**	**Path**
Displaying Megaplex alarms	Mux Active Alarm List (*Figure 2-28*)	Fault ➥Alarms ➥Display ➥All…
Setting alarm severity level	Alarms Severity & ACM Relay dialog box (*Figure 2-31*)	Fault ➥Alarms ➥Config. ➥ Severity & ACM Relay…
Defining alarm attributes	Alarm Attributes dialog box (*Figure 2-32*)	Fault ➥Alarms ➥Config. ➥Attributes…
Defining scope of alarm reports	Alarm Report dialog box (*Figure 2-33*)	Fault ➥Alarms ➥Config. ➥ Reports…
Displaying the history log	All Buffer Alarms dialog box (*Figure 2-34*)	Fault ➥History Log ➥All…
Displaying most recent alarms	New Buffer Alarms dialog box (*Figure 2-35*)	Fault ➥History Log ➥New…

Tasks – Window	Dialog Box and Parameter Location	Path
Closing/displaying Agent view	See *Agent Window*	Window ➥Agent View



Tasks – Options	Dialog Box and Parameter Location	Path
Defining the manager list	Manager List dialog box (*Figure 2-36*)	Options ➥Manager List…



Note *Menu entries will appear gray if there is no communication with the Agent or if the menu option is not relevant.*

Displaying Megaplex Software Information

The **Mux Info** command allows you to view current Megaplex configuration information.

➤ **To display the current Megaplex status and unit configuration:**

- From the **Configuration** menu, select **Mux Info…** or click the **Mux Info** button .

The Mux Information dialog box appears.

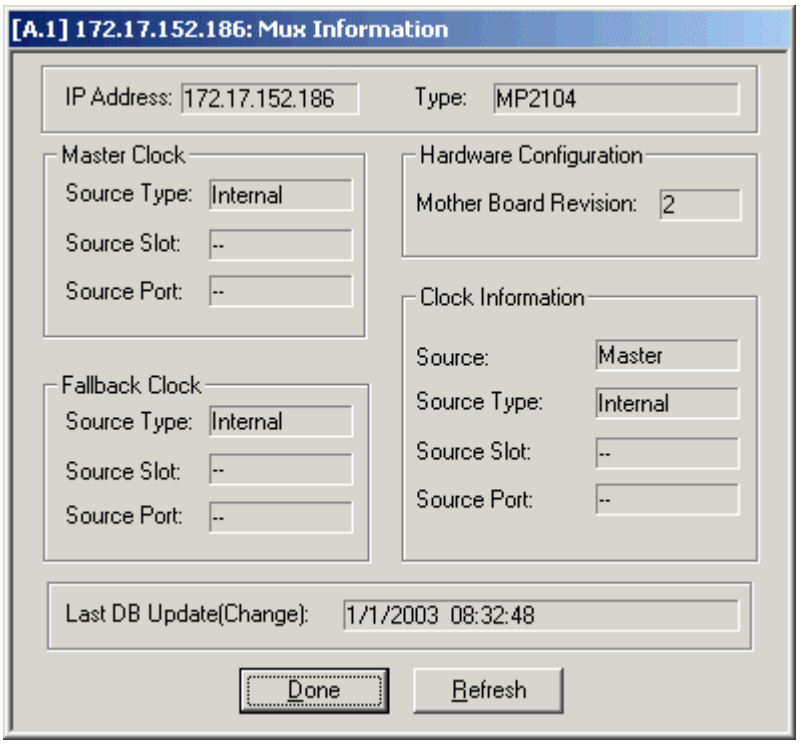


Figure 2-2. Mux Information Dialog Box

Table 2-2. Mux Information Parameters

Parameter	Possible Values / Remarks
Type	The type of Megaplex: **MP-2100, MP-2104**
Master Clock	
Source Type	Main source for Megaplex timing **Internal, Rx Clock, Adaptive**.
Source Slot	The slot containing the card on which the master clock is located. This parameter is applicable only when the master clock source type is Rx Clock. **IO-1** to **IO-12** Empty slots are not selectable. For MP-2104: **IO-1** to **IO-5**.
Source Port	The port through which the master clock signal is received by the Megaplex. **external-1** to **external-12**. For an HS-Q/M card, only **external-1** is available When Type is Adaptive: **Bundle1..Bundle120**
Fallback Clock	
Source Type	Alternate source for the Megaplex timing, to be used in case the master clock fails: **Internal, Rx Clock, Adaptive**
Source Slot	The slot containing the card on which the fallback clock is located. This parameter is enabled only when the fallback clock source type is Rx Clock. **IO-1** to **IO-12** Empty slots are not selectable For MP-2104: **IO-1** to **IO-5**
Source Port	The port through which the fallback clock signal is received by the Megaplex **external-1** to **external-12** For an HS-Q/M card: **external-1** When Type is Adaptive: **Bundle1..Bundle120**

Displaying System Information

The **System Info** command displays physical information about the current Megaplex.

➤ **To display system information:**

1. From the **Configuration** menu, select **System Info...**

   The System Information dialog box appears.

2. You may update **Name**, **Contact** and **Location**.
3. Select value for **Voice Level Offset** and click <**Set**>.

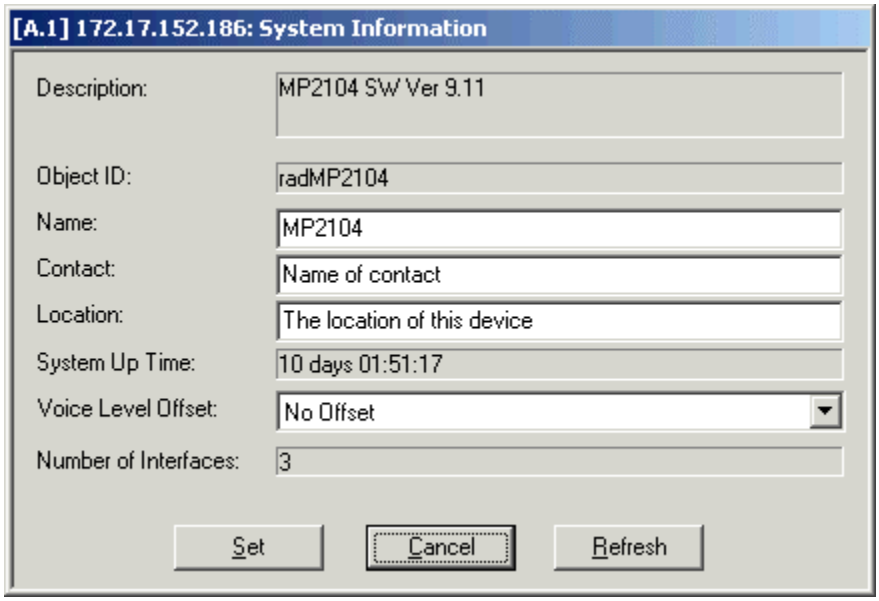


Figure 2-3. System Information Dialog Box

Displaying Interface Information

The **Interface Info** command displays information about the Megaplex's connection to the management station.

➤ **To view Megaplex interface information:**

- From the **Configuration** menu, select **Interface Info…**

  The Interface Information dialog box appears.

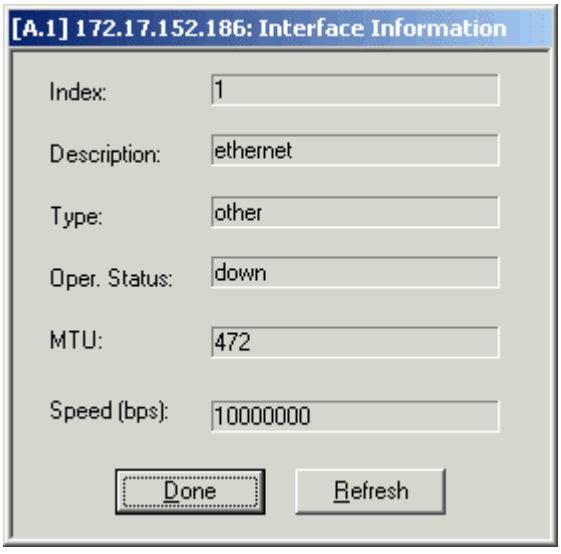


Figure 2-4. Interface Information Dialog Box

Table 2-3. Interface Information Parameters

Parameter	Possible Values / Remarks
Index	Index number of the supervisory port connecting the Megaplex with the network management station
Description	Brief description of the management interface
Type	Communications protocol running on the management interface
Oper Status	Operational status of the management interface: **Up**, **Down**, **Testing**
MTU	Maximum Transmission Unit - size (in octets) of the largest packet which can be transmitted/received on the management interface
Speed	Data rate of the management interface, in bps

Setting the Agent Date and Time

The **Date & Time** command allows you to set the date and time of the Megaplex's real-time clock.

➤ **To set the Megaplex date and time:**

- From the **Configuration** menu, select **Date & Time**.

  The Date & Time Setup dialog box appears.

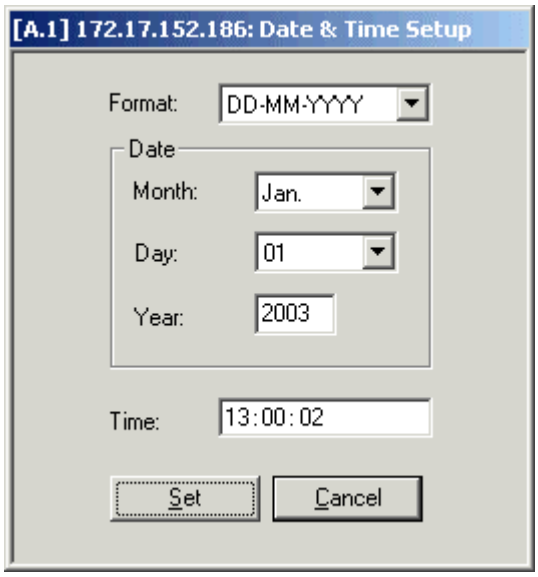


Figure 2-5. Date and Time Setup Dialog Box

Table 2-4. Date & Time Parameters

Parameter	Possible Values / Remarks
Format	European format (DD-MM-YYYY), American format (MM-DD-YYYY) or (YYYY-MM-DD) where DD = day, MM = month and YYYY = year
Month	Month according to the Megaplex's real-time clock
Day	Day according to the Megaplex's real-time clock
Year	Year according to the Megaplex's real-time clock
Time	Time according to the Megaplex's real-time clock

Setting the Default Configuration

The **Default Config** command allows you to select one of the Megaplex's saved configurations as the default configuration. If automatic Flip DB is not activated, this default configuration is the Megaplex's current configuration.

➤ **To select the Default Configuration:**

1. From the **Configuration** menu, select **Default Config…**

   The Default Config dialog box appears.

2. Click the entry describing the configuration that you want to set as the default.
3. Click <**Set**>.

   A message stating, "For activation, select [E] Configuration> Flip DB> Update" appears.

4. Click <**OK**> to confirm.

The selected default configuration is stored in the Megaplex's temporary configuration until you perform the Flip DB>Update operation. If automatic Flip DB is not activated, this default configuration is the Megaplex's current configuration.

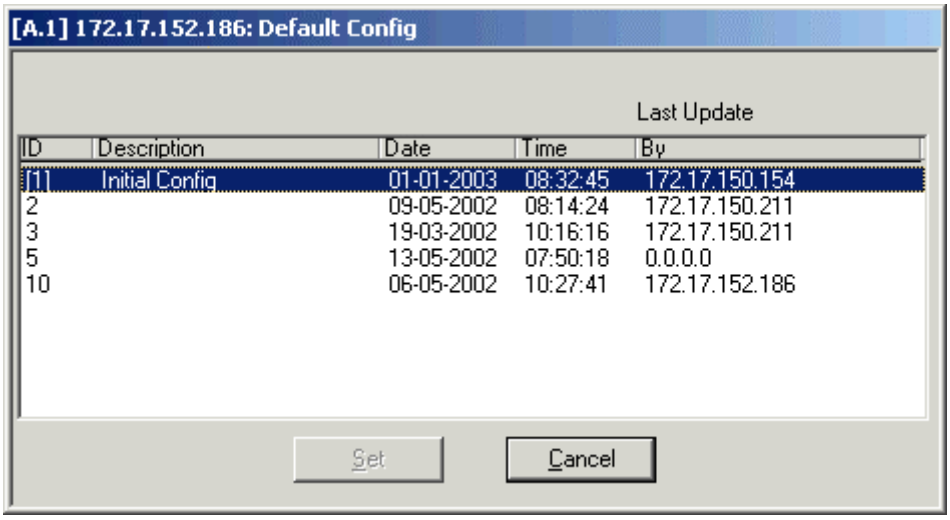


Figure 2-6. Default Config Dialog Box

Table 2-5. Default Config Parameters

Parameter	Possible Values / Remarks
Id	Index number of a Megaplex configuration. The current default configuration number is surrounded by [ ]
Description	Description of the configuration ID as typed during the last update procedure
Date	Date of the configuration's last update according to the agent's real-time clock
Time	Time of the configuration's last update according to the agent's real-time clock
By	IP address of the manager who last updated this configuration

Deleting an Agent Configuration

The **Delete Config** command allows you to delete a configuration from the Megaplex Agent Mode's MTCL card. This command is not available for a configuration that either appears in the Flip DB Decision Table or is the default configuration.

➤ **To delete an agent configuration:**

1. From the **Configuration** menu, select **Delete Configuration…**

   The Delete Config dialog box appears displaying a list of saved Megaplex configurations that do not appear in the Flip DB Decision Table or are not the current default configuration.

2. Click the entry describing the configuration that you want to delete.
3. Click <**Set**>.

   The system requires confirmation of the delete.

4. Click <**OK**> to confirm.

   The selected configuration is deleted from the Megaplex's MTCL-2 card.

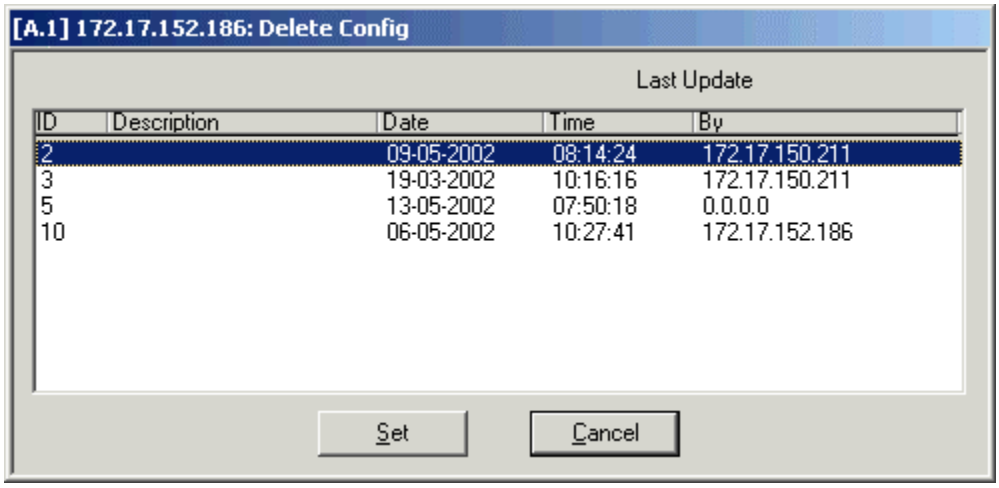


Figure 2-7. Delete Config Dialog Box

Displaying Flip DB Parameters

The **Flip DB** command opens a submenu that includes commands for viewing parameters for flipping configurations.

Figure 2-8. Flip DB Submenu

Displaying the Weekly Agenda

The **Agenda** command displays information about the type of workday for each day of the week. The type of workday helps determine the times of automatic activation for the Flip configuration.

➤ **To display the Flip DB Agenda:**

- From the **Configuration** menu, select **Flip DB** followed by **Agenda…**

  The Flip DB Agenda dialog box appears. The Flip DB Agenda dialog box displays a weekly schedule. Each day of the week corresponds to a day type. A day type can be **Full Workday**, **Partial Workday** or **Weekend**.

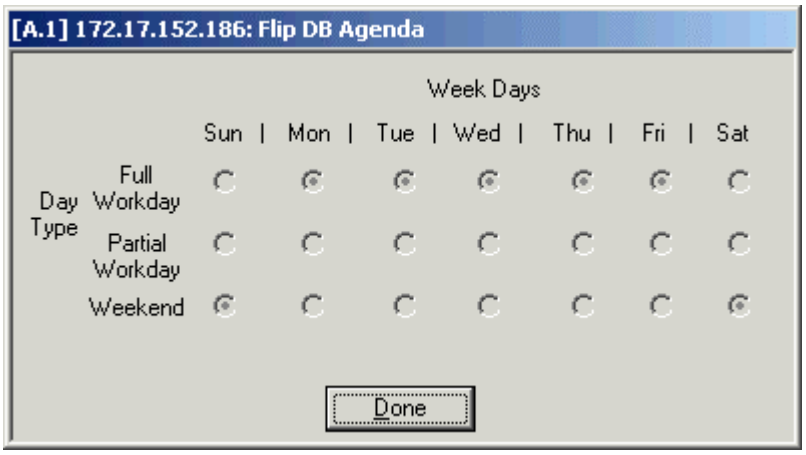


Figure 2-9. Flip DB Agenda Dialog Box

Displaying Flip DB Net Events

The **Net Events** command displays information about the events that occur during the automatic configuration flip.

➤ **To display the Net Events dialog box:**

- From the **Configuration** menu, select **Flip DB** and **Net Events**.

  The Flip DB Net Events dialog box appears.

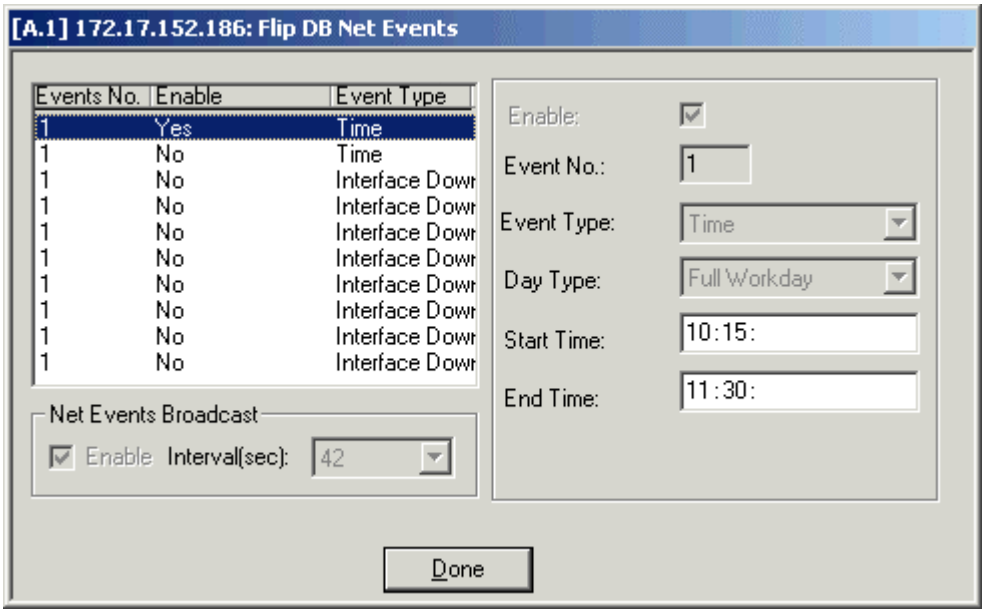


Figure 2-10. Flip DB Net Events Dialog Box Event Type = Time

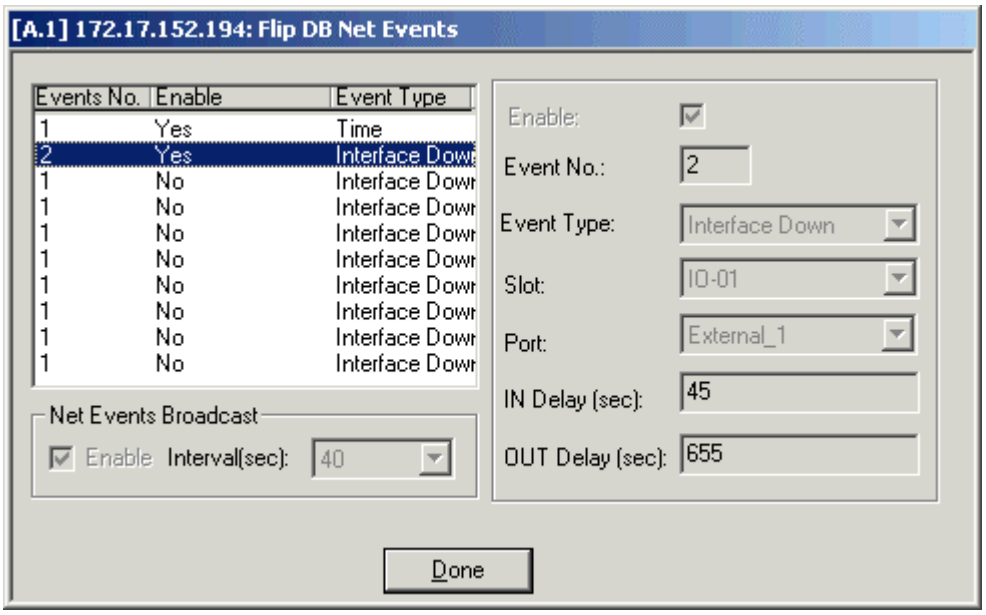


Figure 2-11. Flip DB Net Events Dialog Box Event Type = Interface Down

Table 2-6. Flip BD Net Events Parameters

Parameter	Possible Values / Remarks
Event No.	The net event code number. This number is unique for a particular type of event in the whole net. This prevents usage of the same number by more than one type of event. **1** to **511**
Enable	√ in the Enable column indicates that an entry is valid. To add or modify parameters of a net event, click the Enable checkbox (√) on the right side of the dialog box. To delete/cancel an entry, you must first remove the √.
Event Type	Type of event **Time**, **Interface Down** ***Note:*** *You can enable only one Time Event per Day Type. Enabling more than one Time Event per Day Type causes a failure when you try to save the Flip DB to the Megaplex (Flip DB Update)* For **Event Type=Time**, you can set the following parameters:
Day Type	The type of day as determined in the Flip DB Agenda **Full Workday, Partial Workday**, **Weekend**.
Start Time	Time at which RADview activates the event. ***Note:*** *Start Time must be before the End Time*
End Time	Time at which RADview deactivates the event.
	For **Event Type=Interface Down**, you can set the following parameters:
Slot	Slot in the Megaplex in which the selected net event occurs **IO-1 to IO-12** **For MP-2104: IO-1** to **IO-5**
Port	Port in the Megaplex in which the selected net event occurs **external-1** to **external-12, internal-1** to **internal-12**, depending on the type of card
IN Delay (sec)	Delay time between the reporting of a net event as ON and the actual occurrence of the event: **1** to **999**
OUT Delay (sec)	Delay time between the reporting of a net event as OFF and the actual termination of the event: **1** to **999**

Decision Table

The **Decision Table** displays combinations of events that will cause RADview to flip automatically to a specific configuration.

➤ **To display the Decision Table:**

- From the **Configuration** menu, select **Flip DB** followed by **Decision Table…**

  The Flip DB Decision Table appears.

Each entry in the Flip DB Decision Table defines a combination of events that cause a specific Flip DB action.

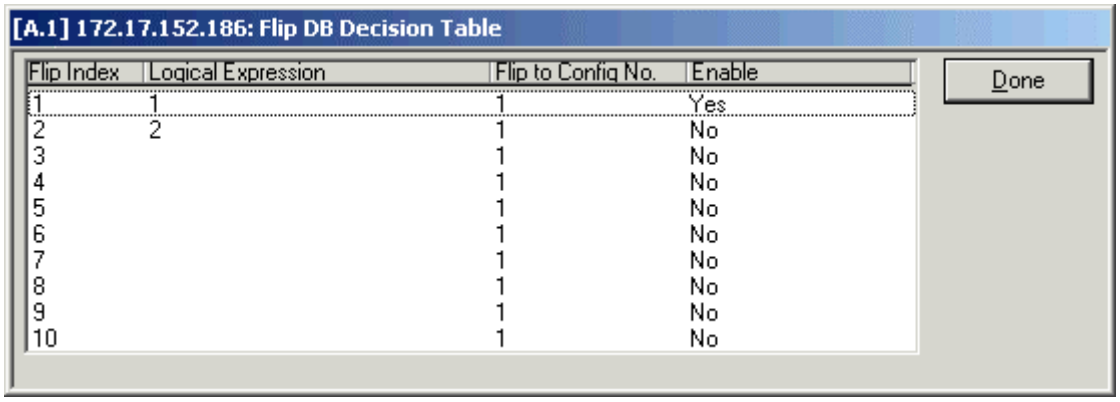


Figure 2-12. Flip DB Decision Table

Table 2-7. Flip DB Decision Table Parameters

Parameter	Possible Values / Remarks
Flip Index	Index number of the entry in the Table according to the order of priority. When multiple event combinations cause flipping to more than one configuration at the same time, RADview will activate the entry that comes first in the Decision Table.
Logical Expression	Combination of net events, which, if they occur, causes RADview to flip to a specific Megaplex configuration. The expression consists of event numbers and the following logical symbols (maximum of 19 characters): & - AND | - OR ! – NOT ( ) – Parentheses enclose a combination of events that comprises a single condition in the logical expression. For example, (2&51)|(!102&4) means that (event no. 2 exists AND event no. 51 exists) OR (event no. 102 does not exist AND event no. 4 exists). ***Note:*** *The logical expression cannot begin with a blank space.*
Flip to Config No.	ID number of the Megaplex configuration that will be activated if the events written in the logical expression occur
Enable	√ in the Enable column indicates that an entry is valid

Net Update

The **Net Update** command opens up a submenu that includes commands for setting an activating delay time, and for activating a Flip configuration in all Megaplexes in the net.

Figure 2-13. Net Update Submenu

Setting the Net Update Delay

The **Delay** command allows you to set the time required for all the Megaplexes in the net to activate the Flip configuration.

➤ **To set the net update delay:**

1. From the **Configuration** menu, select **Net Update** followed by **Delay…**

   The Net Update Delay dialog box appears.

2. Type the number of seconds required to activate the Flip configuration in the whole net.

3. Click <**Set**>.

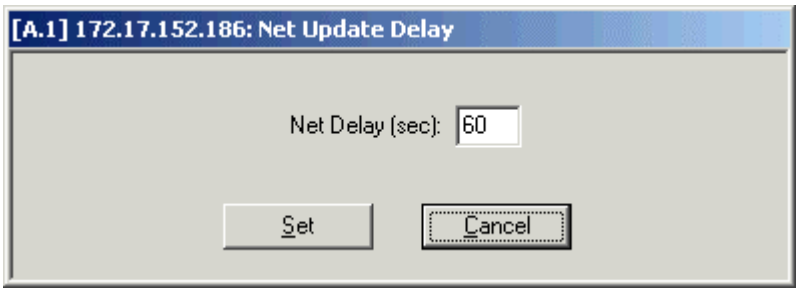


Figure 2-14. Net Update Delay Dialog Box

Activating a Net Update

The **Activate** command updates the current configuration or the flip configuration over the net.

➤ **To update the net configuration:**

1. From the **Configuration** menu, select **Net Update** followed by **Activate**.

   The system requires confirmation of the update.

2. Click <**OK**> to confirm the net update operation.

Displaying Signaling Profile Parameters

➤ **To view signaling profile parameters:**

- From the **Configuration menu**, select **Signaling Profile…**

  The Signaling Profile dialog box appears.

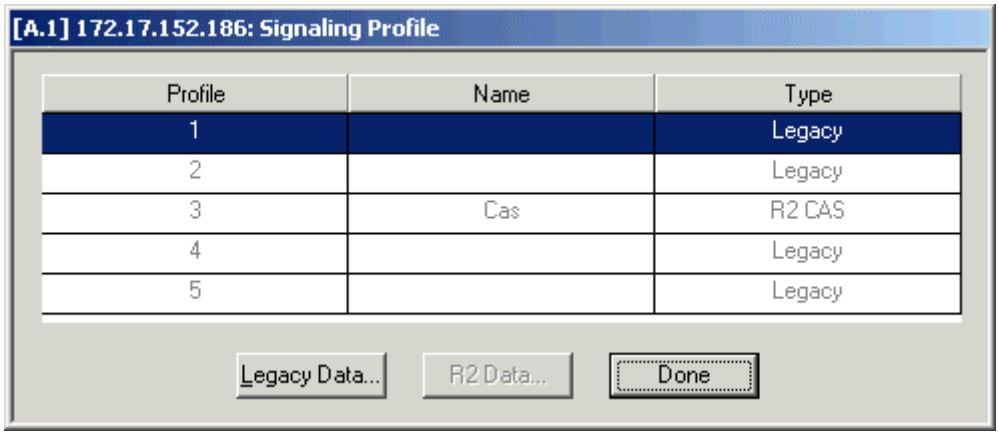


Figure 2-15. Signaling Profile Dialog Box

Viewing Legacy Data Profile

➤ **To view legacy data parameters:**

- From the **Signaling Profile** Dialog Box, select a profile whose type is Legacy and click <**Legacy Data…**>

The Legacy Data dialog box appears.

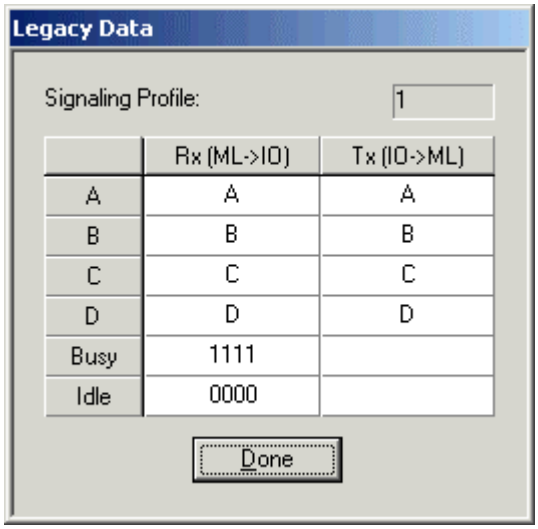


Figure 2-16. Legacy Data Dialog Box

Table 2-8. Legacy Data Parameters

Parameter	Possible Values / Remarks
Signaling Profile	The profile number selected in the Select Profile dialog box **1 to 5**
Rx (ML->IO) column	
A	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
B	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
C	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
D	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
Busy	**0000 .. 1111**
Idle	**0000 .. 1111**
Tx (ML->IO) column	
A	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
B	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
C	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**
D	**A, B, C, D, Inverse A, Inverse B, Inverse C, Inverse D, 1, 0**

Viewing R2 Data Profile

➤ **To view R2 data:**

1. From the **Signaling Profile** Dialog Box, select a profile whose type is R2 CAS and click R2 Data…

   The R2 Data dialog box appears. There are three tabs: **General, Timers** and **Data**.

2. Click on the desired tab to view parameters

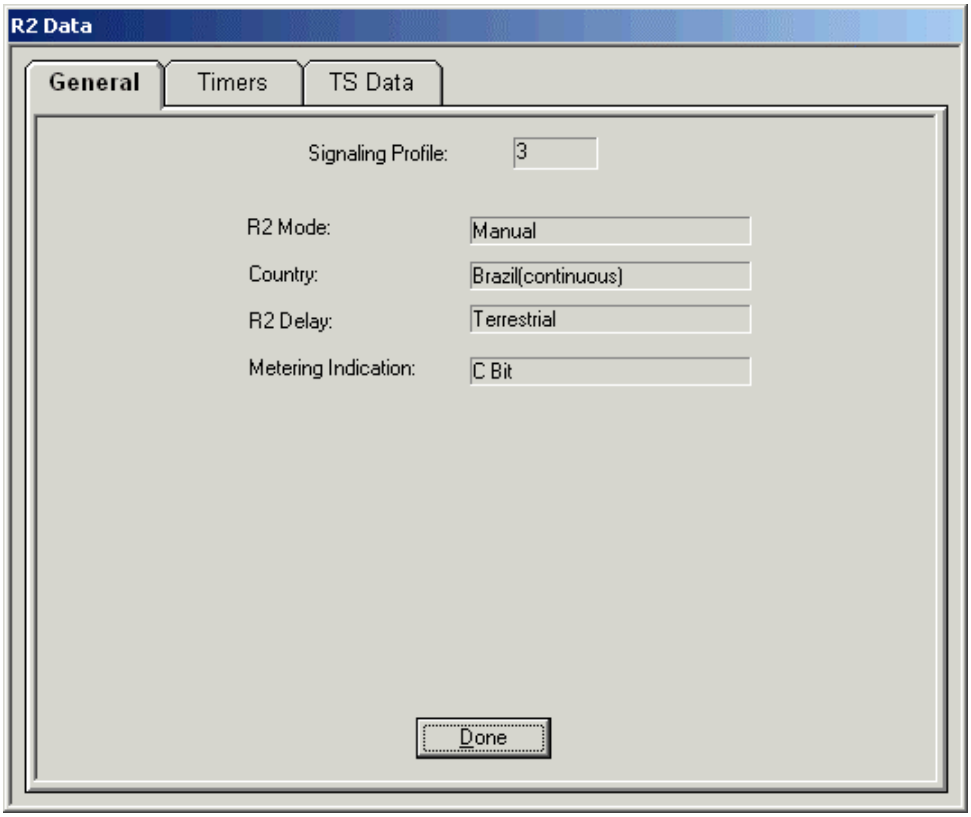


Figure 2-17. R2 Data General Tab Dialog Box

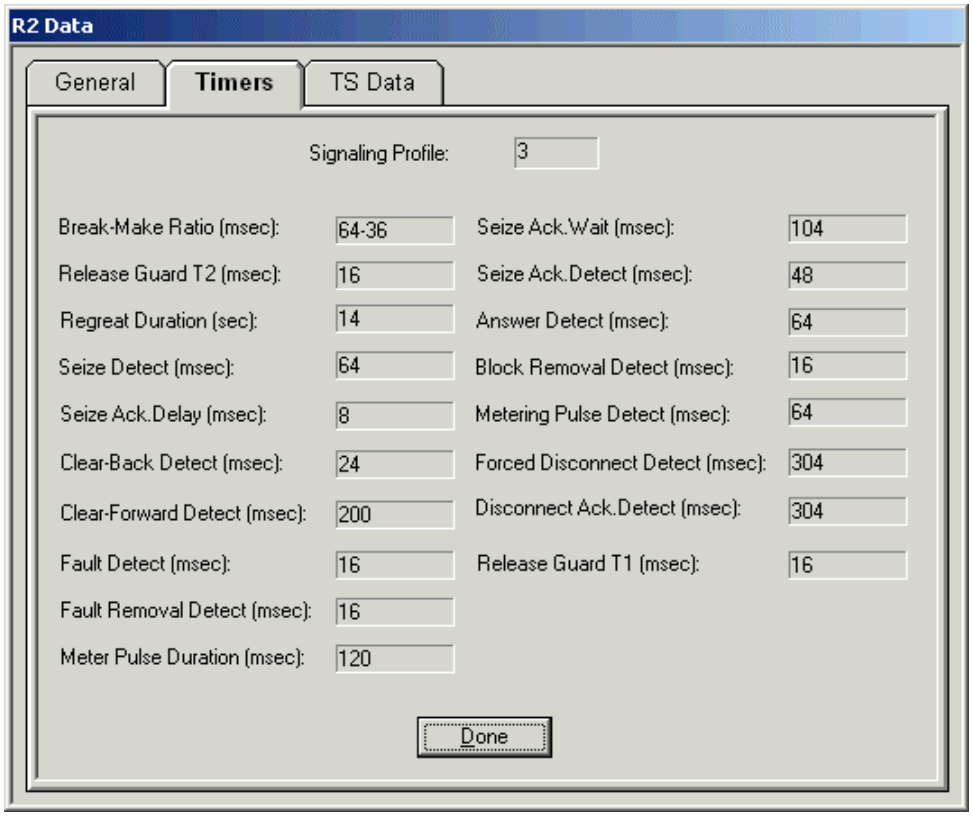


Figure 2-18. R2 Data Timers Tab Dialog Box

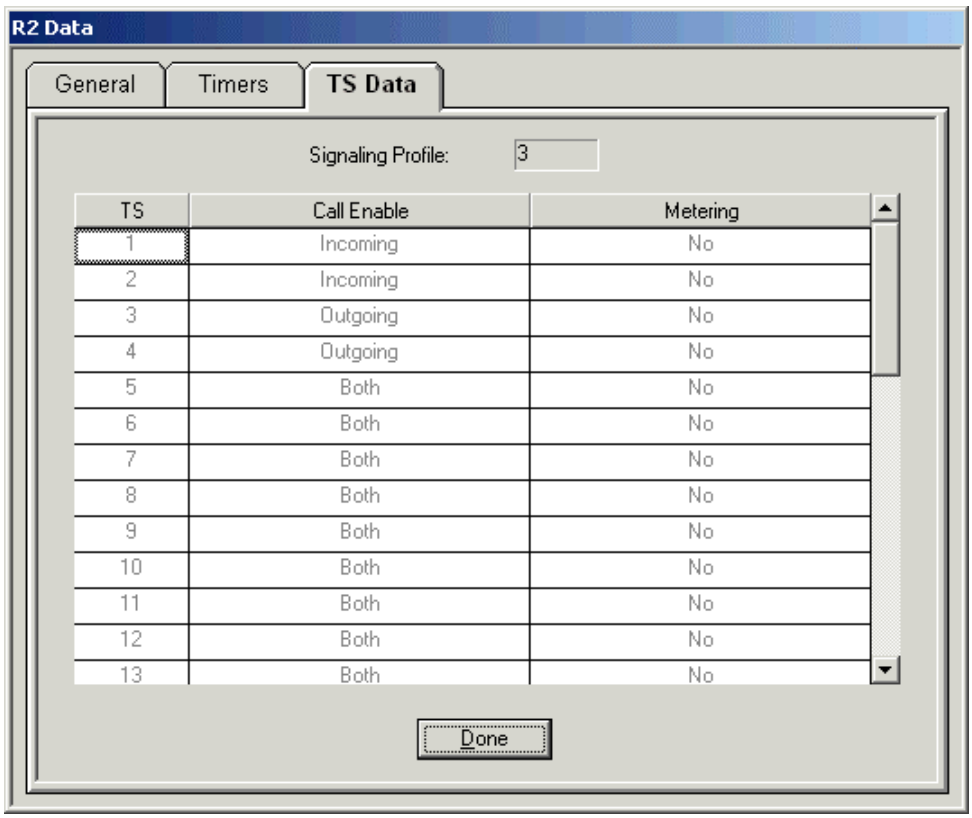


Figure 2-19. R2 Data TS Data Tab Dialog Box

Table 2-9. R2 Data TS Data Parameters

Parameter	Possible Values / Remarks
Signaling Profile	The profile number selected in the Select Profile dialog box **1 to 5**
General Tab	
R2 Mode	**Auto, Manual**
Country	**ITU–T, Korea, India, Brazil (continuous), Brazil (pulsed), Argentina, 7, 8, 9, 10**
R2 Delay	**Terrestrial, Satellite**
Metering Indication	**C Bit, B Bit**
Timers Tab	
Break-Make Ratio (msec)	**56–44, 64–36, 80–20**
Release Guard T2 (msec)	**16..2000**
Regret Duration (sec)	**14..120**
Seize Detect (msec)	**24..448**
Seize Ack. Delay (msec)	**8..304**
Clear-Back Detect (msec)	**24..448**
Clear-Forward Detect (msec)	**200..504**
Fault Detect (msec)	**16..104**
Fault Removal Detect (msec)	**16..104**
Meter Pulse Duration (msec)	**120..304**
Seize Ack. Wait (msec)	**104..1200**
Seize Ack. Detect (msec)	**48..600**
Answer Detect (msec)	**64..448**
Block Removal Detect (msec)	**16..96**
Metering Pulse Detect (msec)	**64..448**
Forced Disconnect Detect (msec)	**304..448**
Disconnect Ack. Detect (msec)	**304..448**
Release Guard T1 (msec)	**16..2000**
TS Data Tab	
TS	**1..31**
Call Enable	**Both, Incoming, Outgoing**
Metering	**Yes, No**

Displaying Redundancy Table Parameters

The **Redundancy Table** command enables you to display the redundancy parameters for the Megaplex.

Note *The redundancy table is not displayed in agent mode for agent version 5.28.*

➤ **To view redundancy table parameters:**

- From the **Configuration** menu, select **Redundancy Table….**

  The Redundancy Table dialog box appears. Fields in the table (marked with an asterisk *) can be reordered by clicking on their columns. Redundancy Mode will display the parameters in the following order: Y Cable, and Dual Cable Parallel Tx. Additionally every group will be displayed according to Primary Slot and Port ascending order.

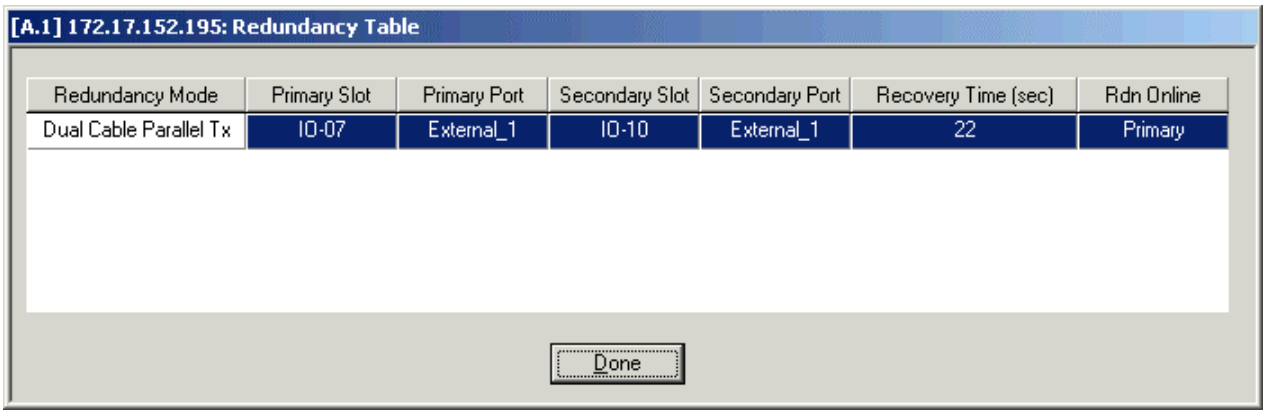


Figure 2-20. Redundancy Table Dialog Box

Table 2-10. Redundancy Table Parameters

Parameter	Possible Values / Remarks
Redundancy Mode	Redundancy Mode for the card **Y Cable**, **Cable Parallel Tx**
Primary Slot	Primary Slot for the card **NA**, **IO-1..IO-12**
Primary Port	Primary Port for the card **external-1..external-2**, **internal-1, Bundle1..Bundle120**
Secondary Slot	Secondary Slot for the card **NA**, **IO-1..IO-12**
Secondary Port	Secondary Port for the card **external-1..external-2**, **internal-1, Bundle1..Bundle120**
Recovery Time (sec)	Recovery time in seconds **1..99**

Displaying V5.1 Variants

➤ **To display V5.1 variants:**

- From the **Configuration** menu, select **V5.1 Variants…**

The V5.1 Variants dialog box appears.

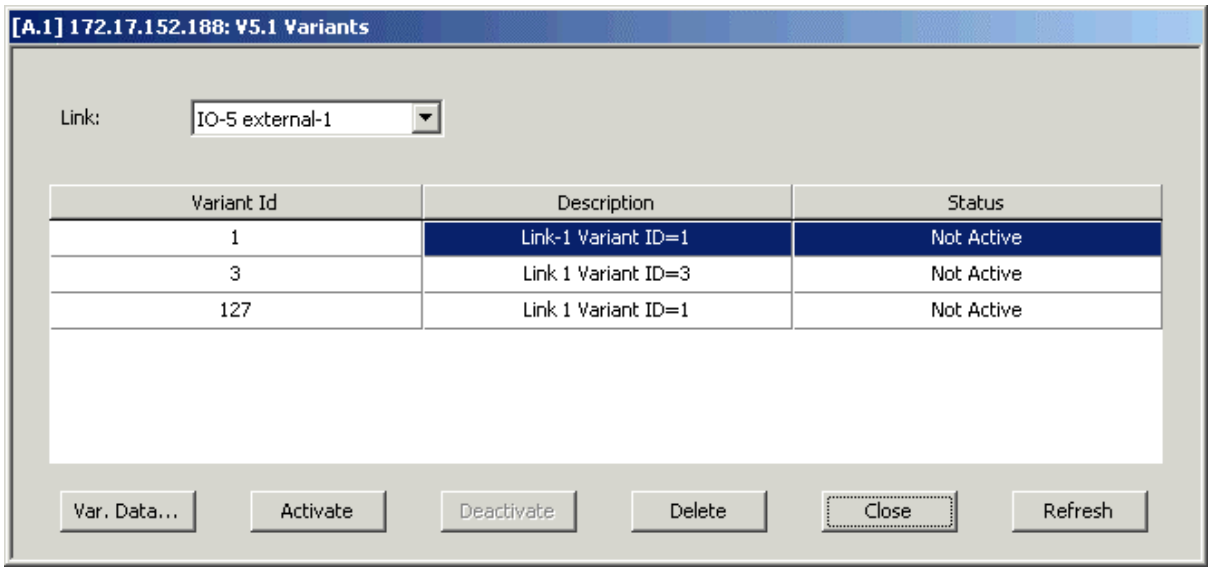


Figure 2-21. V5.1 Variants Dialog Box

Displaying Bundles

➤ **To view the bundle connection table:**

- From the **Configuration** menu, select **Bundle Connection Table…**

The Bundle Connection Table appears.

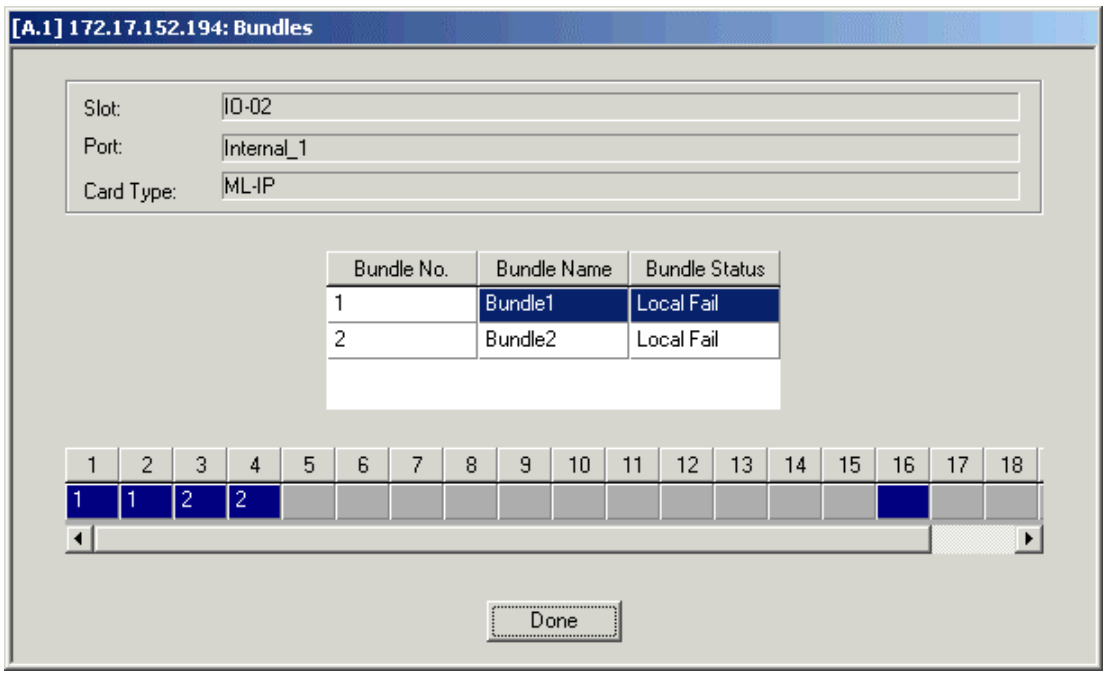


Figure 2-22. Bundle Connection Table

Table 2-11. Bundle Connection Parameters

Parameter	Possible Values/Remarks
IO Slot / Int–n	Slot or Int-n to be configured **for Slots: 1–1..12** **for Int–n: 1..12–2**
Bundle No.	**1–120**
Bundle Name	Bundle name for selected channel. Table will display one bundle name per line
Admin Status	**Connected**, **Disconnected** (frames will not be sent from this channel)
Dest. Name	Logical name or IP address of the destination mux
Next Hop	Indicates IP address to which the Ehternet frame will be sent when the Dest. Name IP is not in the device subnet
Dest. Bundle	Bundle number in the destination mux **1–2016**
Rdn Bundle	**NA**, **Number of redundant bundle**
Exit Port	**External–1**, **External–2**, **Auto**

➤ **To view All Bundle Data:**

- In the Bundle Connection Table, click <**Bundle All Data…**>

  The Bundle All Data dialog box appears.

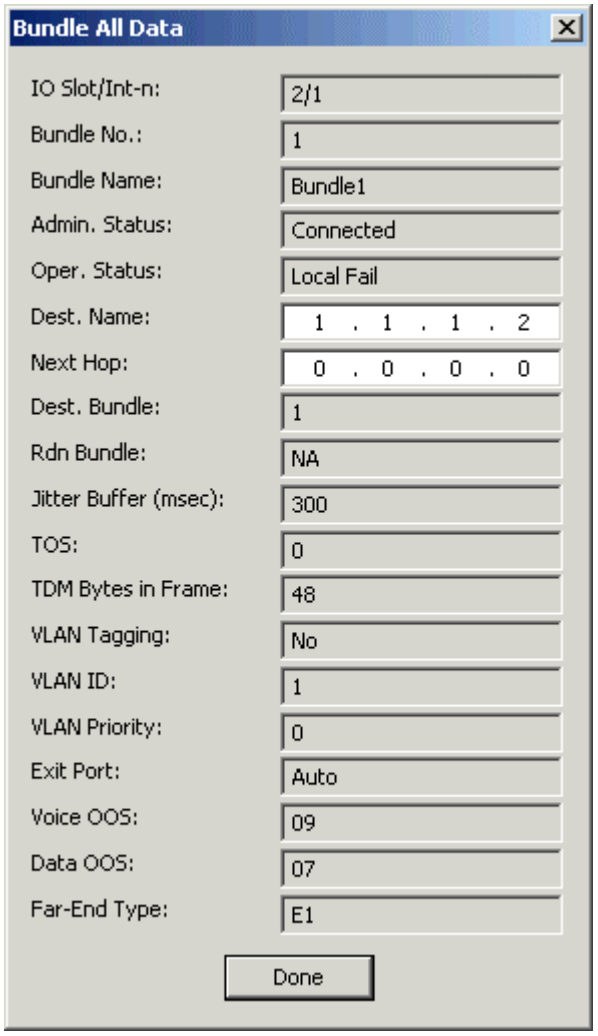


Figure 2-23. Add Bundle Dialog Box

Table 2-12. Add Bundle Connection Parameters

Parameter	Possible Values/Remarks
Slot No.	Slot No.
Channel No.	Channel No.
Bundle Name	Bundle name for selected channel. Table will display one bundle name per line.
Bundle No.	1–120
Admin Status	**Connected**, **Disconnected** (frames will not be sent from this channel)
Dest. Name	Logical name or IP address of the destination mux
Next Hop	Indicates IP address to which the Ehternet frame will be sent when the Dest. Name IP is not in the device subnet
Dest. Bundle	Bundle number in the destination IPmux device **1–2016**

Parameter	Possible Values/Remarks
Jitter Buffer (tens of μsec)	Depth of the jitter buffer (elastic buffer per link whose size is configurable in units of 10 micro seconds (μs). **300..30,000 tens of μs**
ToS	IP ToS (Type of Service) assigned to this channel **0-255** Configures IP ToS field in the IP frames transmitted by the device. Configures the entire byte – not only the 3 ToS bits. ToS assignment applies to all TDM packets leaving mux.
TDM Bytes in Frame	UDP payload (one-eight) length enabling reduction of Ethernet throughput. **48**, **96**, **144**, **192**, **240**, **288**, **336**, **384**
VLAN Tagging	**No**, **Yes**
VLAN ID	VLAN ID: **0-4000**
VLAN Priority	VLAN Priority (Enabled only when VLAN Tagging=Yes) **0-7**
Exit Port	**External–1**, **External–2**, **Auto**
Voice OOS	Voice out-of-service code transmitted on voice time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box **00-FF** (hexadecimal)
Data OOS	Data out-of-service code transmitted on data time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box **00-FF** (hexadecimal)

Displaying Managers Routing Table

➤ **To view the Managers Routing table:**

- From the **Configuration** menu, select **MNG Routing Table…**

The Managers Routing Table appears.

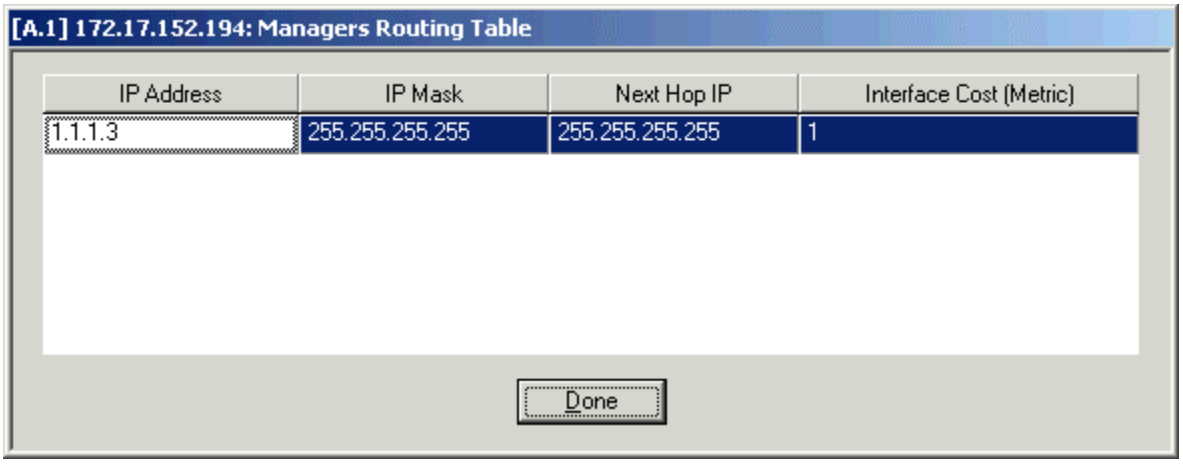


Figure 2-24. Managers Routing Table

Table 2-13. Managers Routing Parameters

Parameter	Possible Values/Remarks
IP Addr	IP Address of manager
IP Mask	IP Address Mask
Next Hop IP	Indicates IP address to which the frame will be sent when the Dest. Name IP is not in the device subnet
Interface Cost (Metric)	**1..15**

Resetting the Device

➤ **To reset the device:**

- From the **Configuration** menu, select **Reset**.

  The Megaplex is reset.

2.2 Megaplex Level Diagnostic Operations

➤ **To run diagnostic test on Bundles:**

1. From the **Diagnostics** Menu, select **Bundle Connection Test…**

   The Bundle Connection Test dialog box appears (Figure 2-25).

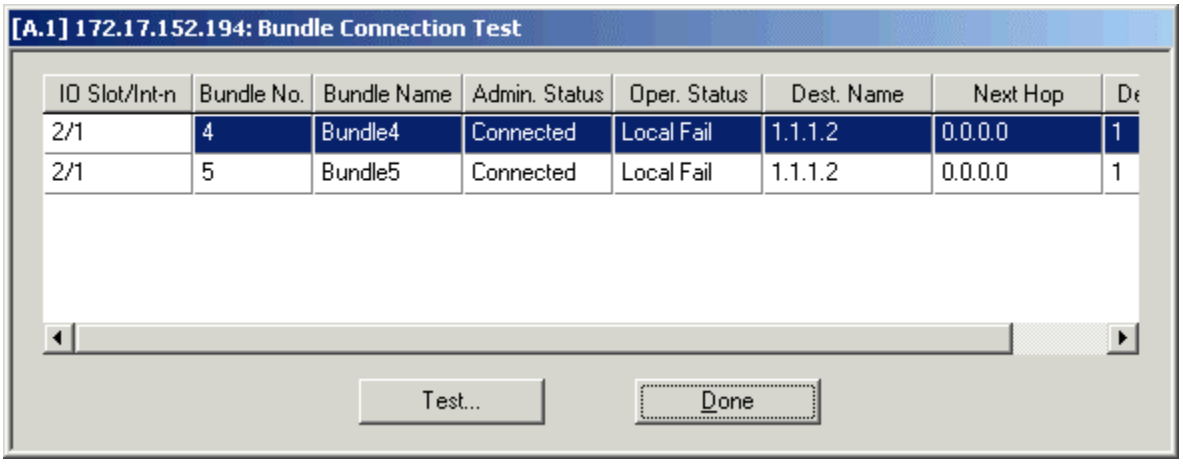


Figure 2-25. Bundle Connection Test Dialog Box – Step I

2. Select desired bundle and click <**Test…**>

   The Bundle Connection Test dialog box appears (Figure 2-26).

3. Select type of test you want to run (from the New Test list) and click <**Start Test**>.

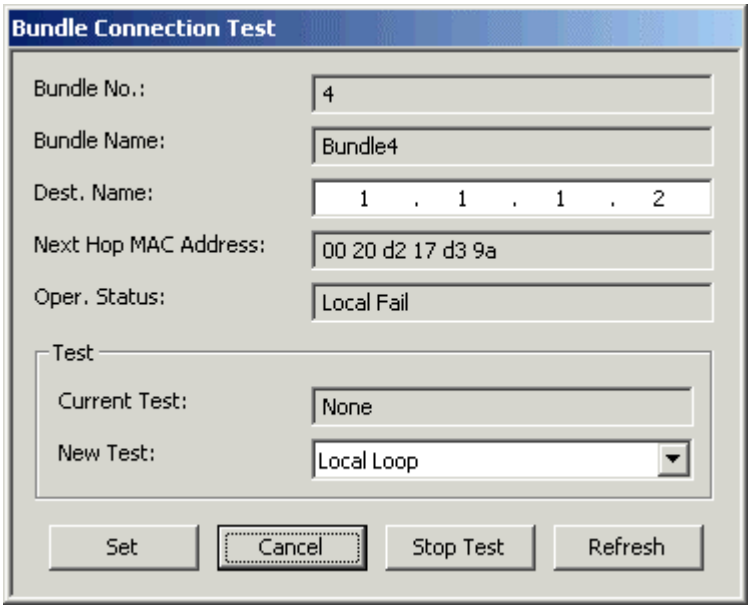


Figure 2-26. Bundle Connection Test Dialog Box – Step II

➤ **To stop the test:**

- Click <Stop Test>.

2.3 Megaplex Level Fault Operations

In the Agent mode Megaplex Level, the **Fault** menu contains options for:

- Displaying and clearing Megaplex-related alarms.
- Viewing a history log of alarms.

Displaying Alarms

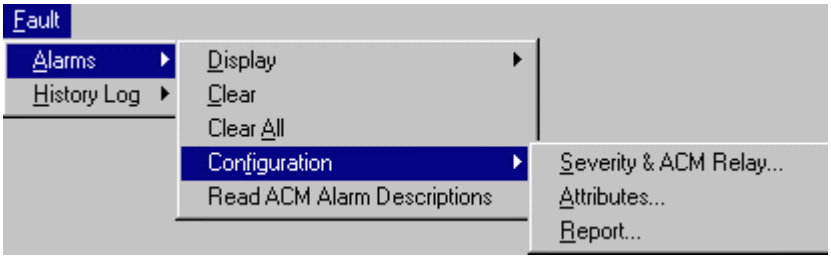


Figure 2-27. Alarms Submenu

You can display:

- All active alarms
- Only system level alarms
- Bundle.

Displaying All Active Alarms

➤ **To display a list of all Megaplex active alarms:**

- From the **Fault** menu, select **Alarms** followed by **Display** and **All…** or click the **Alarms>Display** button .

  The Mux Active Alarm List appears. The order of alarms in the table can be sorted by clicking on the column headers with an asterix "*".

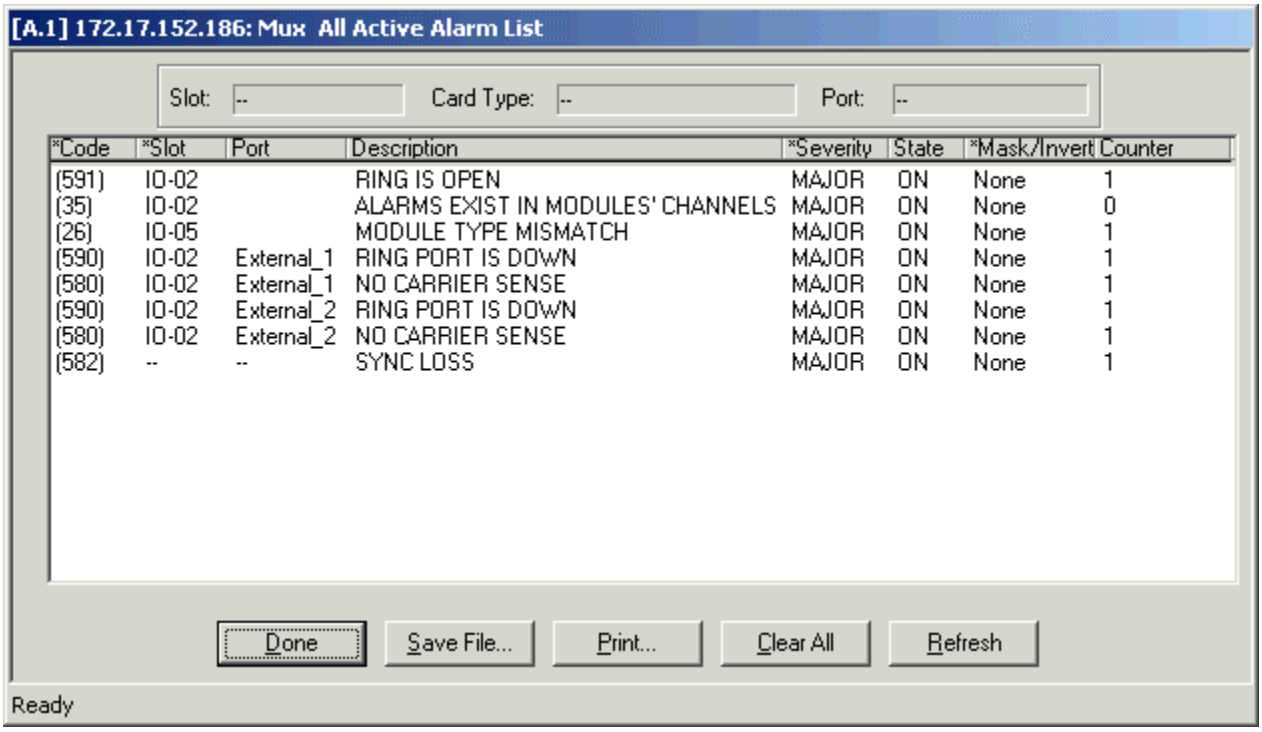

[A.1] 172.17.152.186: Mux All Active Alarm List
Slot: --
Card Type: --
Port: --
*Code *Slot Port Description *Severity State *Mask/Invert Counter
(591) IO-02 RING IS OPEN MAJOR ON None 1
(35) IO-02 ALARMS EXIST IN MODULES' CHANNELS MAJOR ON None 0
(26) IO-05 MODULE TYPE MISMATCH MAJOR ON None 1
(590) IO-02 External_1 RING PORT IS DOWN MAJOR ON None 1
(580) IO-02 External_1 NO CARRIER SENSE MAJOR ON None 1
(590) IO-02 External_2 RING PORT IS DOWN MAJOR ON None 1
(580) IO-02 External_2 NO CARRIER SENSE MAJOR ON None 1
(582) -- -- SYNC LOSS MAJOR ON None 1
Done
Save File...
Print...
Clear All
Refresh
Ready

Figure 2-28. Mux All Active Alarm List

Table 2-14. Mux All Active Alarm Parameters

Parameter	Possible Values / Remarks
No.	Alarm No.
Code	Code number of the alarm
Slot	IO slot where alarm occurred
Port	Port where alarm occured
Description	Brief description of the alarm
Severity	Indication of the effect level of the alarm: **Event**, **Warning**, **Minor**, **Major**, **Critical**
State	Type of alarm: **Off** - No alarms or events in port **Event** - At least one alarm event (including state on, off events) since the last Alarms>Clear operation **Major** - At least one active major alarm since the last Alarms>Clear operation **Minor** - At least one active minor alarm since the last Alarms>Clear operation

Mask/Invert	Indicates mask/invert staus of alarm Mask: **No, No and Save, Yes, Yes and Save** Inverted: **Yes, No**
Counter	Number of times that this alarm occurred since either Megaplex startup or the last time the alarm list was cleared
[Save File…]	Saves alarms list in a file. In the Save dialog box the default file name is output.alr. You can change the filename.
[Clear]	Clears all active alarms. Confirmation is not required.

Displaying System Level Alarms

➤ **To display a list of system level alarms:**

- From the **Fault** menu, select **Alarms** followed by **Display** and **System Level…**

  The Mux Active Alarm List appears displaying active alarms for the current Megaplex. The list begins from either Megaplex startup or from the last time the alarm list was cleared. The order of alarms in the table can be sorted by clicking on the column headers with an asterix "*".

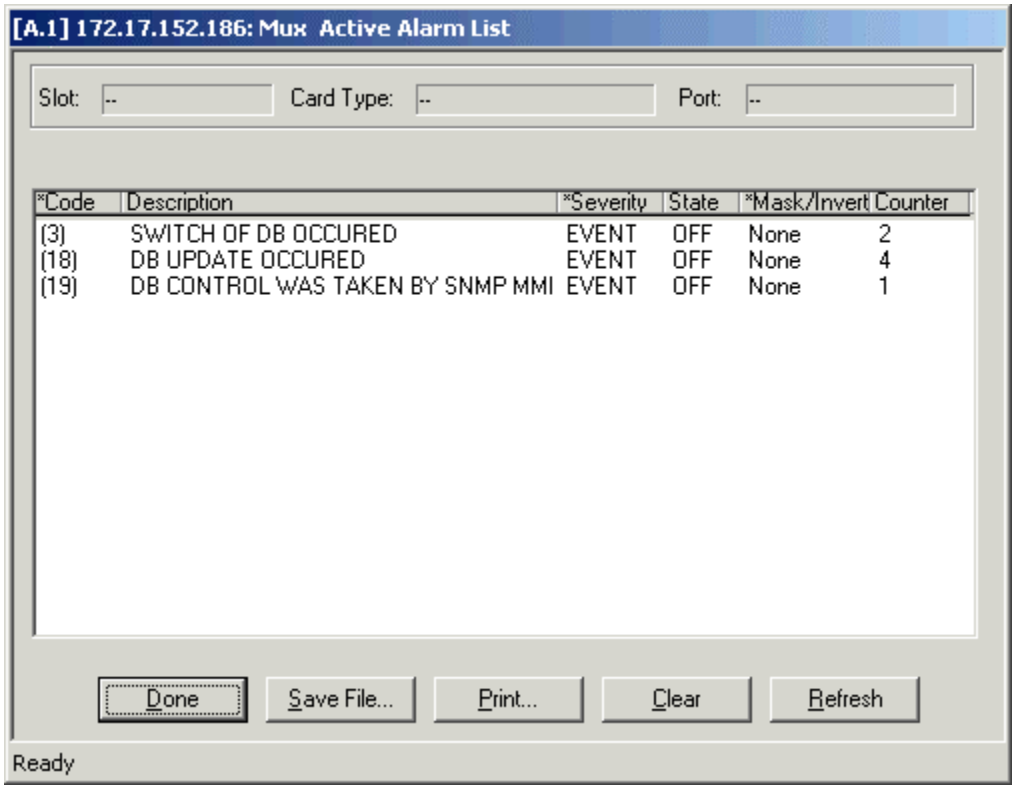


Figure 2-29. Mux Active Alarm List

Table 2-15. Mux Active Alarm Parameters

Parameter	Possible Values / Remarks
No.	Alarm No.
Code	Code number of the alarm

Parameter	Possible Values / Remarks
Description	Brief description of the alarm
Severity	Indication of the effect level of the alarm: **Event**, **Warning**, **Minor**, **Major**, **Critical**
State	Type of alarm: **Off** - No alarms or events in port **Event** - At least one alarm event (including state on, off events) since the last Alarms>Clear operation **Major** - At least one active major alarm since the last Alarms>Clear operation **Minor** - At least one active minor alarm since the last Alarms>Clear operation
Mask/Invert	Indicates mask/invert staus of alarm Mask: **No, No and Save, Yes, Yes and Save** Inverted: **Yes, No**
Counter	Number of times that this alarm occurred since either Megaplex startup or the last time the alarm list was cleared
[Save File…]	Saves alarms list in a file. In the Save dialog box the default file name is output.alr. You can change the filename.
[Clear]	Clears all active alarms. Confirmation is not required.

Displaying Active Bundle Alarms

➤ **To display a list of active bundle alarms:**

- From the **Fault** menu, select **Alarms** followed by **Display** and **Bundles…**

  The Bundle Active Alarms List appears. From this dialog box you can display all IP Bundle alarms or alarms for a specific bundle (selected from table).

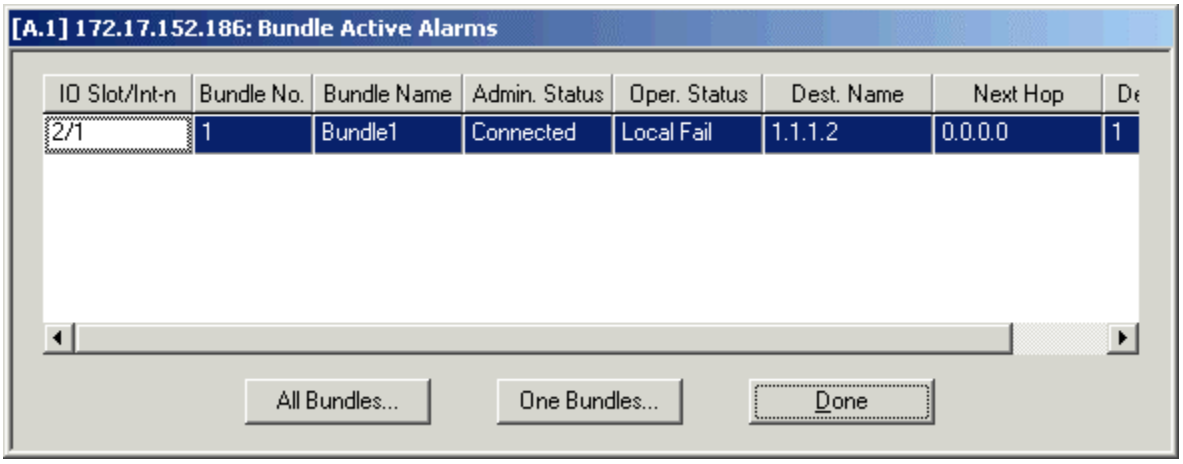


Figure 2-30. Bundle Active Alarms List

➤ **To display all IP Bundle Alarms:**

- Click <**All Bundles…**>.

  A dialog box appears listing all IP Bundle alarms.

➤ **To display IP Bundle Alarms for a specific bundle:**

1. Select an entry in the Bundle Active Alarms List.
2. Click <**One Bundle…**>.

   A dialog box appears listing IP bundle alarms for the selected bundle.

Clearing Alarms

The **Alarms>Clear** command clears active Megaplex alarms from the Mux Active Alarms list:

➤ **To clear active Megaplex alarms from the Mux Active Alarms List:**

- From the **Fault** menu, select **Alarms** and **Clear**.

  No user confirmation is requested.

Clearing All Alarms

The **Alarms>Clear All** command clears all active Megaplex, card and port alarms from the Mux Active Alarms list.

➤ **To clear all active alarms from the Mux Active Alarms List:**

- From the **Fault** menu, select **Alarms** followed by **Clear All**.

  No user confirmation is requested.

Configuring Alarms

For Megaplex level alarms, you can configure the following:

- Severity
- Attributes
- Define the scope of alarm reports.

Setting Alarm Severity

Using the **Severity** command, you can set the level of severity for the various types of alarms.

➤ **To set severity levels for alarms**

- In the **Fault** menu, click **Alarms**, followed by **Configuration** and **Severity & ACM Relay…**

  The Alarms Severity dialog box appears.

[A.1] 172.17.152.186: Alarms Severity & ACM Relay
Code
Description
Default Status
Severity
ACM Slot
ACM Port
1 DB CONTROL WAS TAKEN BY TERM MMI EVENT EVENT None NA
2 DB CONTROL WAS TAKEN BY LCD MMI EVENT EVENT None NA
3 SWITCH OF DB OCCURED EVENT EVENT None NA
4 LOSS OF ALMS FROM HISTORY BUFF EVENT EVENT None NA
5 NO MEM LEFT FOR TRACING NEW ALMS MAJOR MAJOR None NA
6 AGENT TYPE MISMATCH MAJOR MAJOR None NA
7 CL-A & CL-B HAVE DIFF SW/HW MAJOR MAJOR None NA
8 DEFAULT DB WAS LOADED ON STARTUP EVENT EVENT None NA
9 CLK IS DIFF FROM MASTER CLK SRC MAJOR MAJOR None NA
10 CLK CHANGED TO MASTER CLK SRC EVENT EVENT None NA
11 CLK CHANGED TO FALLBACK CLK SRC EVENT EVENT None NA
12 CLK CHANGED TO INTERNAL CLK SRC EVENT EVENT None NA
Set
Cancel
Ready

Figure 2-31. Alarms Severity & ACM Relay Dialog Box

The Alarms Severity dialog box displays a list of alarms, their types and a severity level. The dialog box contains the following parameters:

Table 2-16. Alarms Severity & ACM Relay Parameters

Parameter	Possible Values / Remarks
Code	Identifier of the alarm
Description	Brief description of the alarm
Default Status	Type of alarm: **Event**, **Minor**, **Major**
Severity	Indication of the effect level of the alarm: **Event**, **Warning**, **Minor**, **Major**, **Critical**.
ACM Slot	ACM Slot
ACM Port	ACM Port

Note *If Default Status is Event but Severity is not Event, a filter is required to obtain the required severity.*

Setting Alarm Attributes

Using the **Attributes** command, you can set a period of time for alarm filters validity and the attributes for the selected Megaplex alarms. The defined attributes pertain to specific alarm codes, slots and ports.

➤ **To view alarm attributes**

- In the **Fault** menu, click **Alarms** followed by **Configuration** and **Attributes…**

The Alarm Attributes dialog box appears.

Note *It may take several minutes for the Alarm Attributes dialog box to appear.*

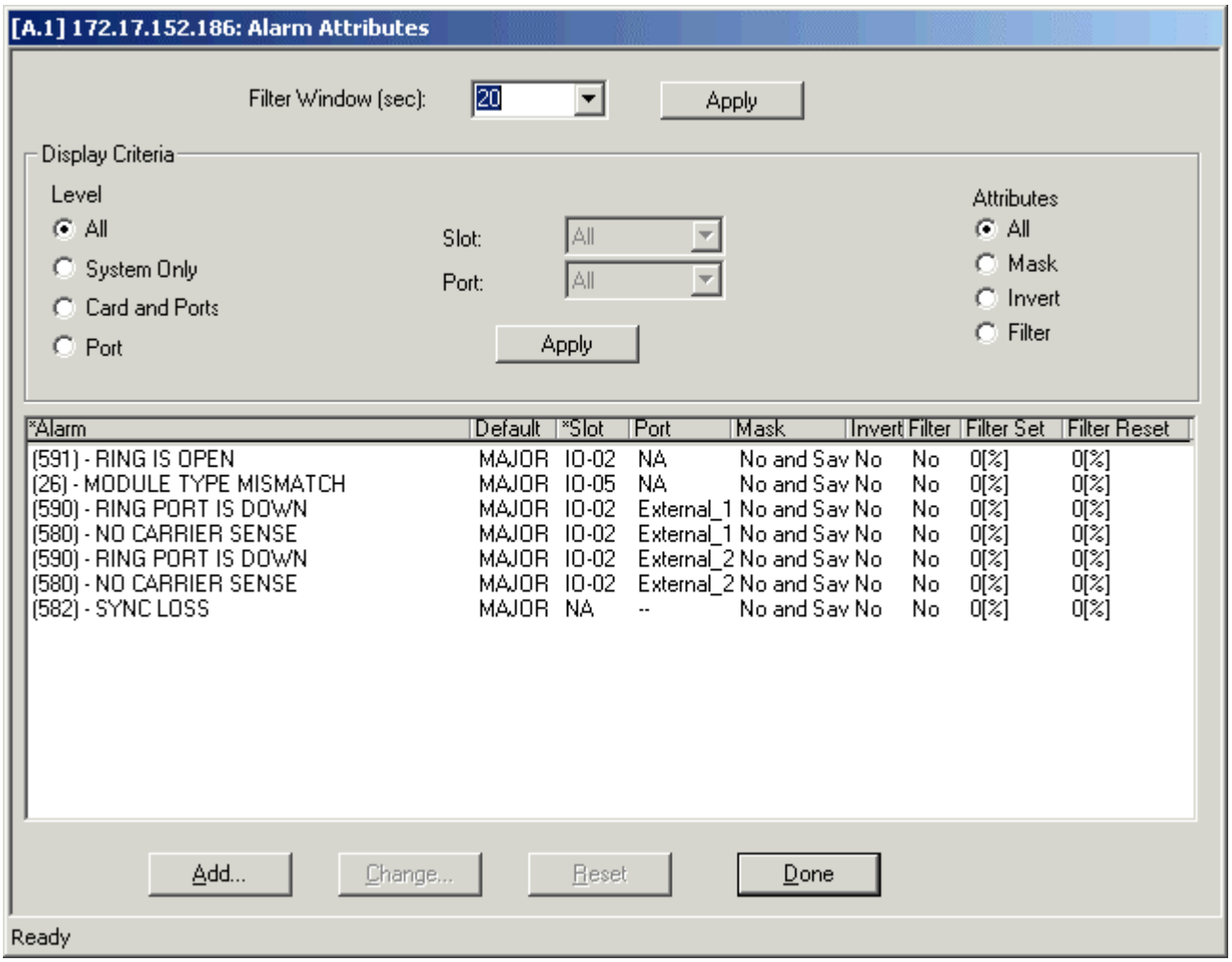


Figure 2-32. Alarm Attributes Dialog Box

In the **Alarm Attributes** dialog box, you can set the filter time period (window) and view a list of alarm attributes for the selected Megaplex.

Table 2-17. Alarm Attributes Parameters

Parameter	Possible Values / Remarks
Filter Window (at top of dialog box)	Time period in which the filter is valid To set the time period, drag the slider and click <**Apply**> **1..255 seconds**
*Alarm	Identifier of the alarm that retains the attributes in this list and a brief description of the alarm ***Note**: * indicates that you can sort the order of the alarms by Code, Slot or Port. Double-click the column*

Parameter	Possible Values / Remarks
Default	Default state of this alarm: **Minor, Major**
*Slot	Slot in which the card/port alarm attributes are valid. The attributes can be valid in all slots in the selected Megaplex or in a specific slot, depending on the Megaplex's configuration. Attributes that are set for a specific slot override an all-slots alarm configuration in the specific slot only **NA, All, PS-A, PS-B, CL-A, CL-B, IO-1 to IO-12** For an Agent Level alarm, the only possible value is NA ***Note**: * indicates that you can sort the order of the alarms by Slot, Port or Code. Double-click the column*
Port	Port in which the alarm attributes are valid. The attributes can be valid in all ports in the selected slot or in a specific port, depending on the Megaplex's configuration. Attributes that are set for a specific port override an all-ports alarm configuration in the specific port only **NA, All, external-1 to external-12, internal-1 to internal-12** For an Agent Level or Card Level alarm, the only possible value is NA
Mask	A masked alarm: Does not affect the operational status of the selected Megaplex. Is not logged in the alarm buffer. Does not generate a trap. Does not cause a LED on the Megaplex panel to turn on. Appears in the Active Alarm List. Cannot be cleared during a Clear or Clear All operation. May be saved. If it is not saved, the mask will be lost if the card is removed, reset, or if the Megaplex is turned off. **No, No and Save, Yes, Yes and Save**
Invert	Alarm that retains an inverted status. For example, suppose that you don't want to see an alarm in the Alarm list all the time, but you want to know when it was fixed. The Invert status hides the alarm but then "activates" it and informs you when it is fixed. **Yes, No** Only active state alarms with a severity level of warning, major, minor or critical can be inverted. An inverted alarm cannot be masked by the Mask function. An inverted alarm cannot be cleared by an Alarms>Clear or Alarms>Clear All command. An inverted alarm cannot be saved, so the inversion will be lost if the Megaplex is turned off. However, the inversion is retained after the card is removed.
Filter	A filter helps prevent frequent changes to a state alarm (which results in frequent reports). The filter also prevents frequent reports for the same event. The filter functions in conjunction with the F. Set and the F. Reset parameters (see below). **Yes, No**

Parameter	Possible Values / Remarks
Filter Set	Filter set limit. The filtered alarm is active if: A state alarm is in the ON state for more than the specified percentage of the time defined by the Filter Window **0% to 100%** An event occurs more than the specified number of times during the time defined by the Filter Window **0 to 255** times ***Note:*** *The Filter Set limits must be greater than the Filter Reset limits. If a state alarm or event occurs between the F. Set and F. Reset limits, the alarm's status remains unchanged*
Filter Reset	Filter reset limit. The filtered alarm is not active if: A state alarm is in the ON state for less than the specified percentage of the time defined by the Filter Window **0% - 100%** An event occurs less than the specified number of times during the time defined by the Filter Window **1 - 255 times**
[Add…]	Click <**Add…**> to open Add Alarm Attributes dialog box. Add a new set of alarm attributes and click <**Set**>.
[Change…]	Select an entry in the table and click <**Change…**> to open Change Alarm Attributes dialog box. Change alarm attributes and click <**Set**>.
[Reset]	Select an entry in the table and click <**Reset**> to can reset the attributes of an alarm type to their default values. The Reset operation removes any filters, sets Invert to No, and sets Mask to No and Save. If the alarm is not active, it will be removed from the Alarm Attributes table.

Sorting Alarm Attributes

If the **Alarm Attributes** list contains at least two entries, you can display entries according to alarm level type.

➤ **To sort the alarm attributes**

1. In the Level group of the Alarm Attributes dialog box, select the alarm level type that you want to display. The available options are: **All**, **System only**, **Card and ports** and **Port**.
2. If the alarm level type is **Card and ports** or **Port**, select a slot. The available options are **PS-A**, **PS-B**, **CL-A**, **CL-B**, **IO-1** to **IO-12** and **All**.
3. If the alarm level type is **Port**, select a port. The available options are: **external-1** to **external-12**, **internal-1** to **internal-12** and **All**.
4. Click <**Apply**>. The alarm types that match the selected level appear in the Alarm Attributes table.

➤ **To display attributes of all alarms in the selected level in the Alarm Attributes table:**

- In the **Attributes** group, select **All**. Click <**Apply**>.

➤ **To display attributes of masked alarms (Mask = *Yes* or *Yes and Save*) within the selected level in the Alarm Attributes table:**

1. In the **Attributes** group, select **Mask**.

   If the selected level is **All**, all masked alarms appear in the Alarms Attributes table.

   If the selected level is **System**, only masked alarms whose Slot and Port are **NA** appear in the Alarms Attributes table.

   If the selected level is **Card** and ports, only masked alarms whose slot matches the Level group's Slot parameter appear in the Alarms Attributes table.

   If the selected level is **Ports**, only masked alarms whose slot matches the Level group's Slot and Port parameters appear in the Alarms Attributes table.

2. Click <**Apply**>.

➤ **To display attributes of inverted alarms (Invert = *Yes*) within the selected level in the Alarm Attributes table:**

1. In the **Attributes** group, select **Invert**.

   If the selected level is **All**, all inverted alarms appear in the Alarms Attributes table.

   If the selected level is **System**, only inverted alarms whose Slot and Port are **NA** appear in the Alarms Attributes table.

   If the selected level is **Card** and ports, only inverted alarms whose slot matches the Level group's Slot parameter appear in the Alarms Attributes table.

   If the selected level is **Ports**, only inverted alarms whose slot matches the Level group's Slot and Port parameters appear in the Alarms Attributes table.

2. Click <**Apply**>.

➤ **To display attributes of filtered alarms (Filter = *Yes*) within the selected level in the Alarm Attributes table:**

1. In the **Attributes** group, select **Filter**.

   If the selected level is **All**, all filtered alarms appear in the Alarms Attributes table.

   If the selected level is **System**, only filtered alarms whose Slot and Port are **NA** appear in the Alarms Attributes table.

   If the selected level is **Card** and **ports**, only filtered alarms whose slot matches the Level group's Slot parameter appear in the Alarms Attributes table.

   If the selected level is **Ports**, only filtered alarms whose slot matches the Level group's Slot and Port parameters appear in the Alarms Attributes table.

2. Click <**Apply**>.

Defining Scope of Alarm Reports

Using the **Reports** command, you can define the scope, type and severity of alarm reports that you will receive at the network management station.

➤ **To define an alarm report:**

1. In the **Fault** menu, click **Alarms**, followed by **Configuration** and **Reports…**

   The Alarm Report dialog box appears.

2. Set the desired severity level for each report: **Event**, **Warning**, **Minor**, **Major**, or **Critical**.

3. Click <**Set**>.

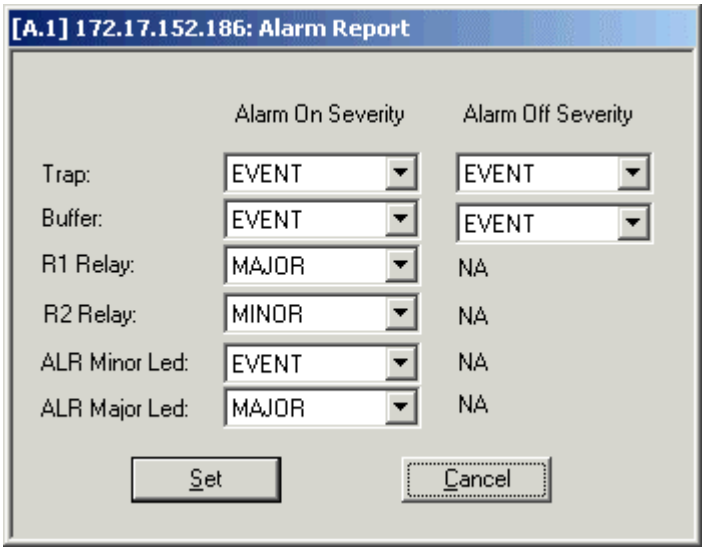


Figure 2-33. Alarm Report Dialog Box

Table 2-18. Alarm Report Parameters

Parameter	Possible Values / Remarks
Trap	Define whether you want to receive traps for all alarms or for only those alarms of at least a certain severity. **Alarm On Severity** - Minimum level of severity required for sending a trap to the network management station. Trap severity must be equal or higher than buffer severity. **Alarm Off Severity** - Maximum level of severity allowed for a trap not to be sent to the network management station.

Parameter	Possible Values / Remarks
Buffer	Define whether you want the alarm buffer to contain all alarms (including traps) or only those alarms of at least a certain severity. **Alarm On Severity** - Minimum level of severity required for sending an alarm to the alarm buffer **Alarm Off Severity** - Maximum level of severity allowed for an alarm not to be sent to the alarm buffer A masked alarm does not appear in the buffer and no traps are sent for it, even if its severity matches the Alarm On Severity specified here.
R1/R2 Relay	Define whether you want to receive the beep sound of the R1/R2 Relay contact for all alarms or for only those alarms of at least a certain severity. **Alarm On Severity** - Minimum level of severity required for sending a beep sound to the network management station
ALR Minor LED	Define the level of severity at which the MTCL2's ALR Minor LED turns on.
ALR Major LED	Define the level of severity at which the MTCL2's ALR Major LED turns on.

Read ACM Alarm Descriptions

Using the **Read ACM Alarm Description** command, you can initiate an update of the ACM Alarm Descriptions.

➤ **To update the ACM Alarm Descriptions:**

- In the Fault menu, click Alarms, followed by Configuration and Read ACM Alarm Descriptions …

  The ACM Alarm Descriptions are updated and saved in the NMS database.

Displaying the History Log

The History Log lists all Megaplex, card and port alarms since the last time the log was cleared.

Displaying All Buffer Alarms

The **History Log>All** command displays the entire contents of the Megaplex's alarm buffer.

➤ **To display the contents of the Megaplex's alarm buffer:**

- From the **Fault** menu, select **History Log** followed by **All…**

  The All Active Alarms dialog box appears. The Alarm Buffer List displays all recorded Megaplex, card and port alarms since the last time the log was cleared. If the list is long, you can click the scroll bar or scroll arrows to display more entries.

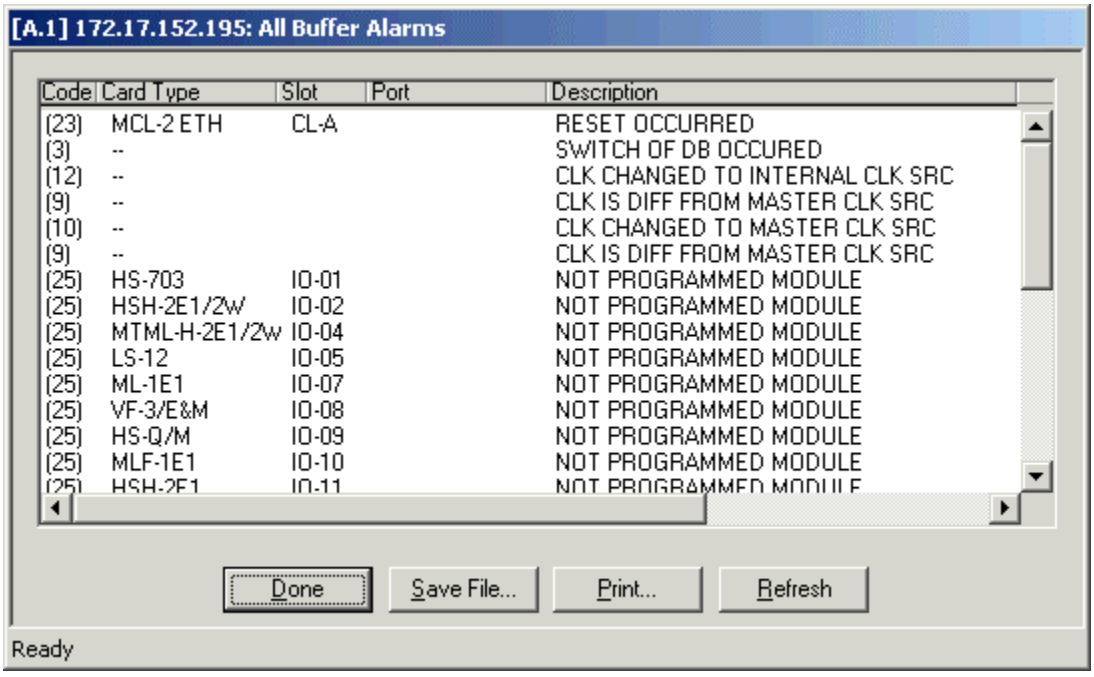

[A.1] 172.17.152.195: All Buffer Alarms
Code Card Type Slot Port Description
(23) MCL-2 ETH CL-A RESET OCCURRED
(3) -- SWITCH OF DB OCCURED
(12) -- CLK CHANGED TO INTERNAL CLK SRC
(9) -- CLK IS DIFF FROM MASTER CLK SRC
(10) -- CLK CHANGED TO MASTER CLK SRC
(9) -- CLK IS DIFF FROM MASTER CLK SRC
(25) HS-703 IO-01 NOT PROGRAMMED MODULE
(25) HSH-2E1/2W IO-02 NOT PROGRAMMED MODULE
(25) MTML-H-2E1/2W IO-04 NOT PROGRAMMED MODULE
(25) LS-12 IO-05 NOT PROGRAMMED MODULE
(25) ML-1E1 IO-07 NOT PROGRAMMED MODULE
(25) VF-3/E&M IO-08 NOT PROGRAMMED MODULE
(25) HS-Q/M IO-09 NOT PROGRAMMED MODULE
(25) MLF-1E1 IO-10 NOT PROGRAMMED MODULE
(25) HSH-2E1 IO-11 NOT PROGRAMMED MODULE
Done
Save File...
Print...
Refresh
Ready

Figure 2-34. Mux All Active Alarm List

Table 2-19. Mux All Active Alarm List Parameters

Parameter	Possible Values / Remarks
Code	Code number of the alarm
Card Type	Type of card in which the alarm originated. This parameter is not applicable for Megaplex alarms
Slot	Slot number of the card in which the alarm originated. This parameter is not applicable for Megaplex alarms
Port	Port number in which the alarm originated. This parameter is applicable only for port alarms
Description	Description of the alarm
Status	Type of alarm. The possible values are: **Off** - No alarms or events in port. **Event** - At least one alarm event (including state on, off events) since the last Alarms>Clear operation. **Major** - At least one active major alarm since the last Alarms>Clear operation. **Minor** - At least one
Date	Date when the alarm occurred
Time	Time when the alarm occurred
[Save File..]	Click <**Save File…**> to save all buffer alarms in a file. The default filename is output.txt. You can change this. In the **Save** dialog box click <**OK**>.

Displaying New Buffer Alarms

The **History Log>New** command displays only the contents of the Megaplex's alarm buffer since the last time that the New command was selected.

➤ **To display new buffer alarms:**

- From the **Fault** menu, select **History Log** followed by **New**…

  The New Buffer Alarms dialog box appears displaying the same type of information as the All Buffer Alarms dialog box. However, the New Buffer Alarms dialog box shows only alarms that occurred since the last time the All Buffer Alarm dialog box was opened.

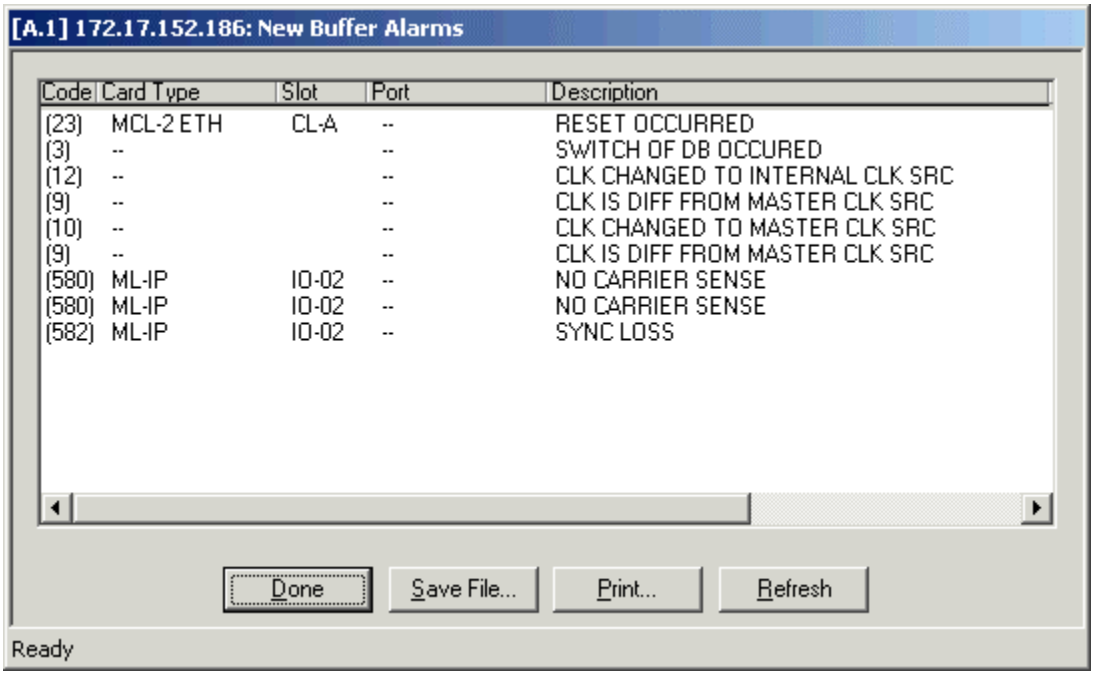

[A.1] 172.17.152.186: New Buffer Alarms
Code
Card Type
Slot
Port
Description
(23) MCL-2 ETH CL-A -- RESET OCCURRED
(3) -- -- SWITCH OF DB OCCURED
(12) -- -- CLK CHANGED TO INTERNAL CLK SRC
(9) -- -- CLK IS DIFF FROM MASTER CLK SRC
(10) -- -- CLK CHANGED TO MASTER CLK SRC
(9) -- -- CLK IS DIFF FROM MASTER CLK SRC
(580) ML-IP IO-02 -- NO CARRIER SENSE
(580) ML-IP IO-02 -- NO CARRIER SENSE
(582) ML-IP IO-02 -- SYNC LOSS
Done
Save File...
Print...
Refresh
Ready

Figure 2-35. New Buffer Alarms Dialog Box

2.4 Agent Window

➤ **To close the Agent view of the Megaplex Level window:**

From the **Window** menu, select **Agent View** or click the **Agent View** button .

The Edit Configuration view (only) appears on the screen.

2.5 Defining the Manager List

The **Manager List** displays the manager station addresses that can receive Megaplex traps.

➤ **To display the Manager List:**

- From the **Options** menu, select **Manager List**.

The Manager List dialog box appears.

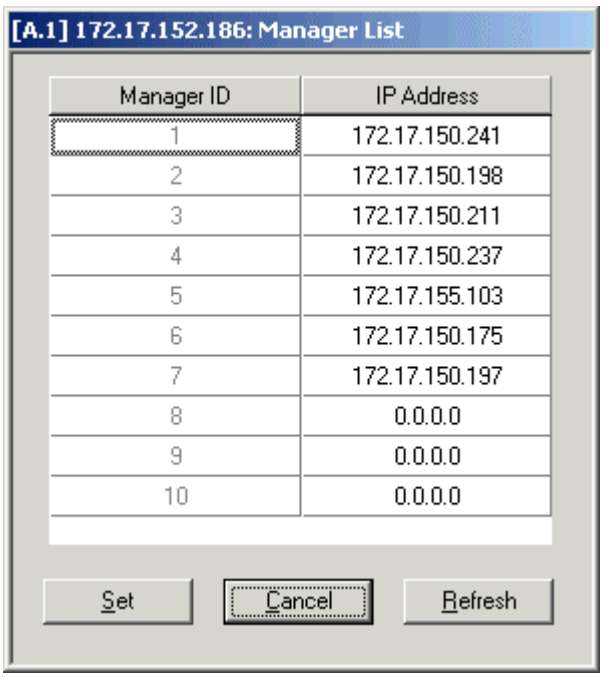


Figure 2-36. Manager List

Table 2-20. Manager List Parameters

Parameter	Possible Values / Remarks
Manager ID	Index number of the management station in the table. The Megaplex agent supports only a maximum of ten management stations that can receive traps
IP Address	IP address of the management station.

➤ **To update the Manager List:**

1. Click an entry that you want to change or a line without an IP Address.
2. In the **IP Address** column, type the IP Address of the management station.
3. Click <**Set**>.

2.6 Megaplex Level Statistics Operations

➤ **To statistics for Bundles:**

1. From the **Statistics** Menu, select **Bundle Connection Statistics…**
   The Bundle Connection Statistics Table appears (*Figure 2-37*).
2. Select an entry from the list and click <**Statistics…**>.
   The Bundle Connection Statistics dialog box appears (*Figure 2-38*).

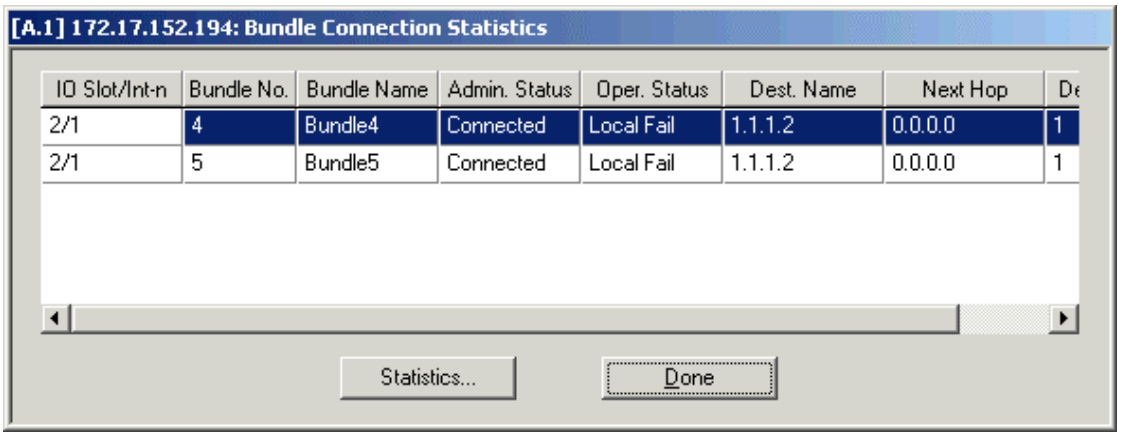


Figure 2-37. Bundle Connection Statistics Table

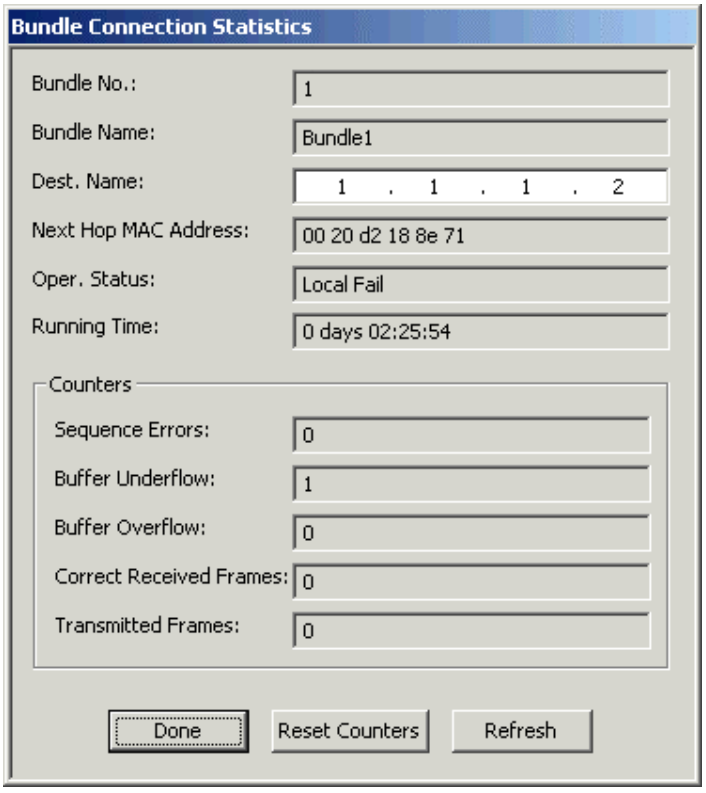


Figure 2-38. Bundle Connection Statistics

➤ **To Reset Counters:**

- Click <**Reset Counters**>

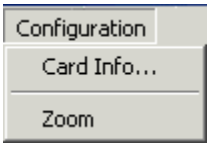
2.7 Agent Card Level Operations

RADview provides management and monitoring functions in the Card Level. In the Megaplex (system) Level, you select a card by clicking or double-clicking it. A blue border outlines a selected card. Double-clicking a card opens the Card View of the selected card.

Table 2-21 lists the different management options for the card level.

Note *Card Level Configuration menu options are dependent upon the selected card. You cannot zoom in on PS cards, empty slots, and unknown cards.*

Table 2-22. Card Level Management Options



Tasks – Configuration	Dialog Box and Parameter Location	Path
Displaying zoomed card view	Zoomed Card View (*Figure 2-39*)	Configuration ➥Zoom
Displaying card information	Card Information dialog box (*Figure 2-40*)	Configuration ➥Card Info…
Tasks – Fault	**Dialog Box and Parameter Location**	**Path**
Displaying Alarms	Card Active Alarm List	Fault ➥List…
Clearing active alarms	See	Fault ➥Clear
Clearing all alarms from alarm list		Fault ➥Clear All

Zooming to Card View

You may display a more detailed view of the cards, including individual ports.

➤ **To open the card view of a specific card:**

- In the **Megaplex Level**, click the card and from the **Configuration** menu select **Zoom** or double-click the card.

Note *You cannot zoom in on PS cards, empty slots and unknown cards.*

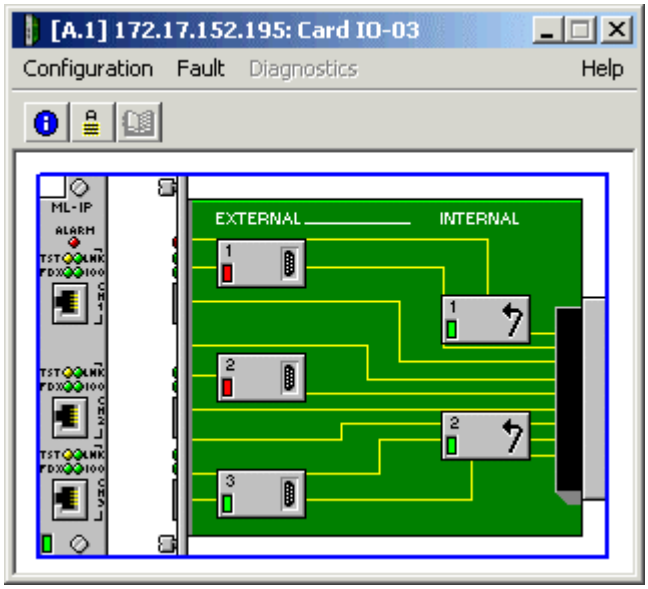


Figure 2-39. A Zoomed Card Agent Mode

➤ **To exit the Card View:**

- Click on the upper right-hand corner of the Card View window.

Displaying Card Configuration Information

The **Card Info** command displays software and hardware version numbers of the selected card.

➤ **To display software and hardware version numbers for a specific card:**

1. Select the card in the mux.
2. From the Configuration menu, select Card Info... or click the **Card Info** button .

   The Card Information dialog box appears.

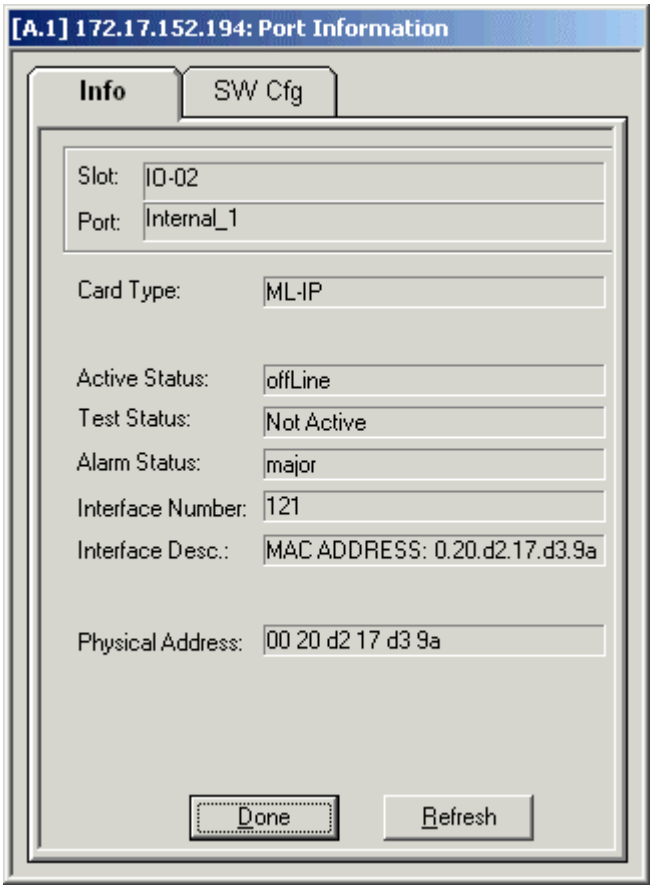


Figure 2-40. Card Information Dialog Box

Table 2-23. Card Information Parameters

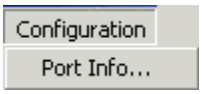
Parameter	Possible Values / Remarks
Slot	Slot in which the selected card is inserted
Programmed Card Type	Type of card that is programmed in this slot
Installed Card Type	Type of the selected card
No. of External Ports	Number of external ports in the selected card
No. of Internal Ports	Number of internal ports in the selected card

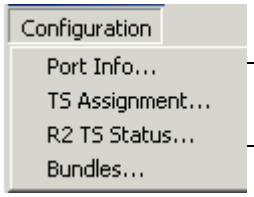
2.8 Agent Port Level Operations

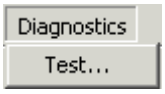
RADview provides management and monitoring functions in the Port Level.

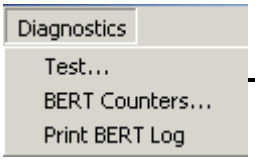
In the Card View, you select a port by clicking it. A blue border outlines a selected port.

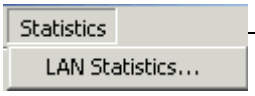
Table 2-24. Port Level Management Options

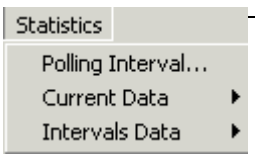












Tasks – Configuration	Dialog Box and Parameter Location	Path
Setting port information	Port Information dialog box (*Figure 2-41*)	Configuration ➥Port Info…
Displaying Time Slots	Time Slots table (*Figure 2-48*)	Configuration ➥TS Assignment…
Displaying R2 TS Status	R2 TS Status Port) (*Figure 2-50*)	Configuration ➥R2 TS Status…
Displaying Bundles	Bundles Dialog Box (*Figure 2-51*)	Configuration ➥Bundles…
Tasks – Fault	**Dialog Box and Parameter Location**	**Path**
Displaying port alarms	Port Active Alarm List (*Figure 2-57*)	Fault ➥Display…
Clearing Port alarms	See *Clearing Port Alarms*	Fault ➥Clear
Tasks – Diagnostics	**Dialog Box and Parameter Location**	**Path**
Running diagnostic tests	Testing dialog box (*Figure 2-54*)	Diagnostics ➥Test…
Tasks – Statistics	**Dialog Box and Parameter Location**	**Path**
Setting polling interval	Polling Interval dialog box (Figure 2-58)	Statistics ➥Polling Interval…
Displaying LAN Statistics	LAN Statistics Dialog Box (*Figure 2-59*)	Statistics ➥LAN Statistics…
Displaying current data statistics in table or graph	See *Displaying Current Data*	Statistics ➥Current Data ➥Table… Statistics ➥Current Data ➥Graph…
Displaying intervals data statistics in table or graph	See *Displaying Intervals Data*	Statistics ➥Intervals Data ➥Table… Statistics ➥Intervals Data ➥Graph…

Displaying Port Information

The **Port Info** command displays information and software configuration of the selected port.

➤ **To display information about a port:**

- In the **Card View**, double-click a port or click the required port and from the **Configuration** menu, select **Port Info** or click the **Port Info** button .

The Port Information dialog box appears.

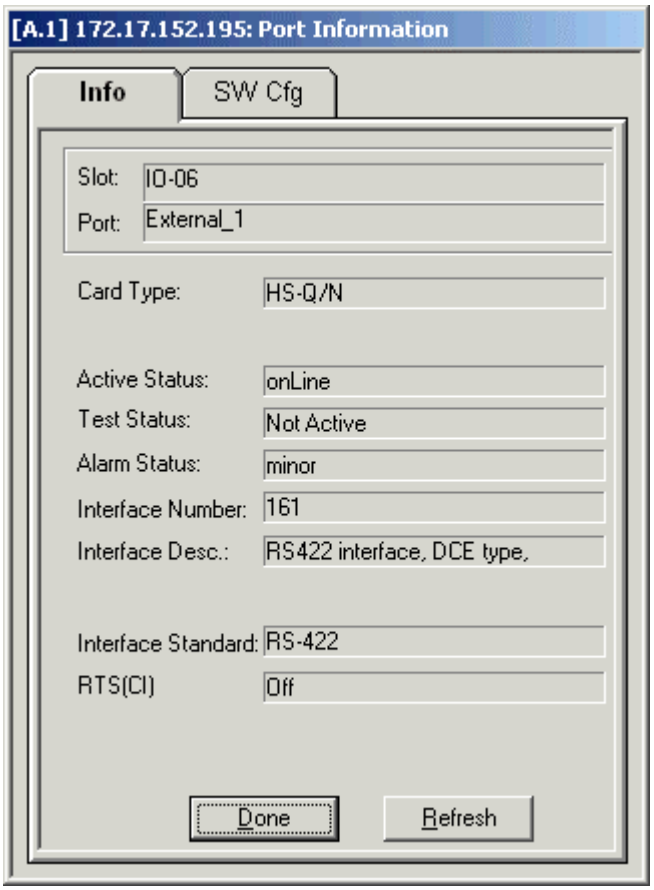


Figure 2-41. Sample Port Information Dialog Box

General information and software configuration information can be displayed by selecting the various tabs.

Table 2-25. Port Information Parameters

Parameter	Possible Values / Remarks
Slot	Slot in which the selected card is inserted **CL-A**, **CL-B**, **IO-1** to **IO-12**. For MP-2104**: IO-1** to **IO-5**
Port	Number of the selected port **external-1** to **external-12**, **internal-1** to **internal-12**
Card Type	Type of the selected card
Active Status	Activity status of the selected port **Unknown** – The port information is not supported **Not Used** – Channel is not connected according to the current configuration **Offline** – Channel is down **Online** – Channel is up **Offline Redundancy** – Redundant channel is down **Online Redundancy** – Redundant channel is now up and is the active link
Test Status	Indicates if a test is currently running on the selected port **Active**, **Not Active**
Alarm Status	Indicates if alarms or events exist in the selected port **Off** – No alarms or events in port **Event** – At least one alarm event (including state on, off events) since the last Alarms>Clear operation **Major** – At least one active major alarm since the last Alarms>Clear operation **Minor** – At least one active minor alarm since the last Alarms>Clear operation
Interface Number	Unique identifying number assigned to the selected port
Interface Desc	Hardware interface type of the selected port

Port Software Configuration

Note *For internal ports of HSH cards, the values FDL or TS0 are not valid values for Inband Management.*

CL Cards

➤ **To view port information for a CL card:**

1. In the **Agent mode**, double-click a CL card.
2. In the **Card View**, double-click a port.
   The Port Information dialog box appears.

Or alternatively:

1. In the **Card View**, click a port.
2. Perform one of the following:
   - From the **Configuration** menu, select **Port Info**

     Or
   - Click the **Port Info** button .

     The Port Information dialog box appears.

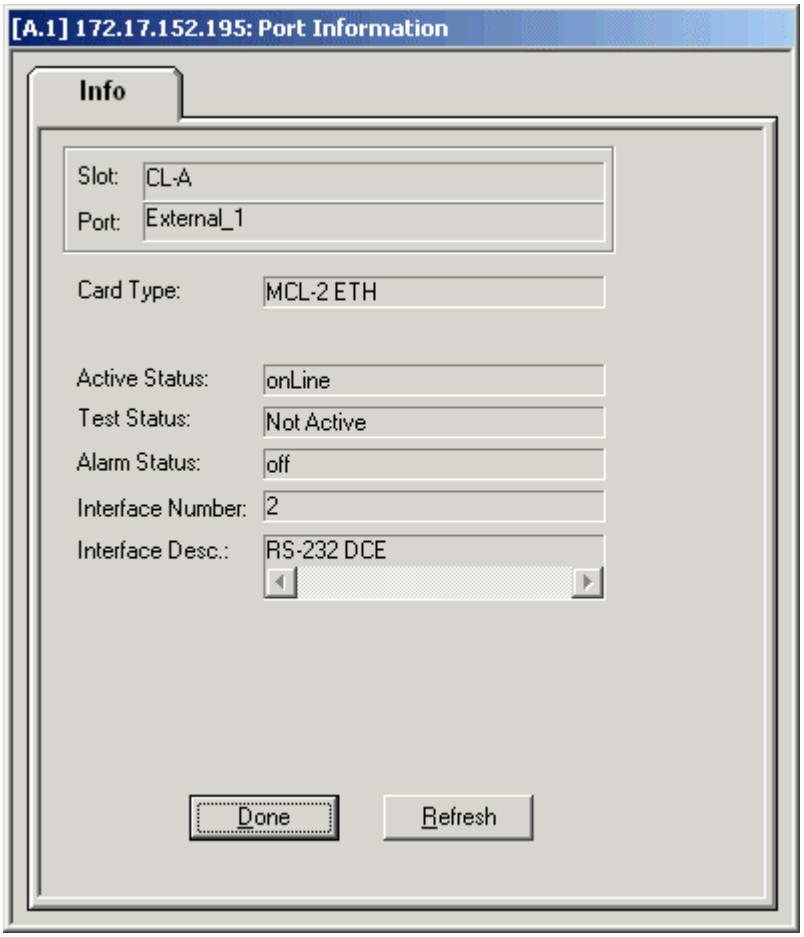


Figure 2-42. CL Port Information

Main Link Cards

Note *ML (Main Link) cards work in conjunction with common logic cards.*
ML-1 cards *(MTML-1/T1 DSU, MTML-1/T1 CSU, MTML-F/T1, MTML-1/E1 DSU, MTML-1/E1 LTU, MTML-F/E1)* ***work with CL-1*** *(CL-1, CL-1 ETH) cards and are supported by Megaplex* ***software versions 6.09 and below****.*
ML-2 cards *(MTML-2/T1, MTML-2/E1)* ***work with CL-2*** *(CL-2, CL-2 ETH) cards and are supported by Megaplex* ***software versions ≥6.30****.*

Megaplex 2100 supports the following ML cards:

Card	Parameters
ML-2	
MTML-2/T1	See *MTML-2/T1 cards*
MTML-2/E1	See *MTML-2/E1 cards*

➤ **To display/change software configuration of an MTML external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info** or click the **Port Info** button .

   The Port Information dialog box appears. The information appears under four possible tabs: **Info, SW Cfg>>, <<SW Cfg** and **ML Rdn**.
3. Click on the desired tab.
4. Review the parameters and click <**Set**>.

MTML-2/T1 cards

Megaplex 2100 supports the MTML-2/T1 card

MTML-2/T1 SW Cfg>> Tab

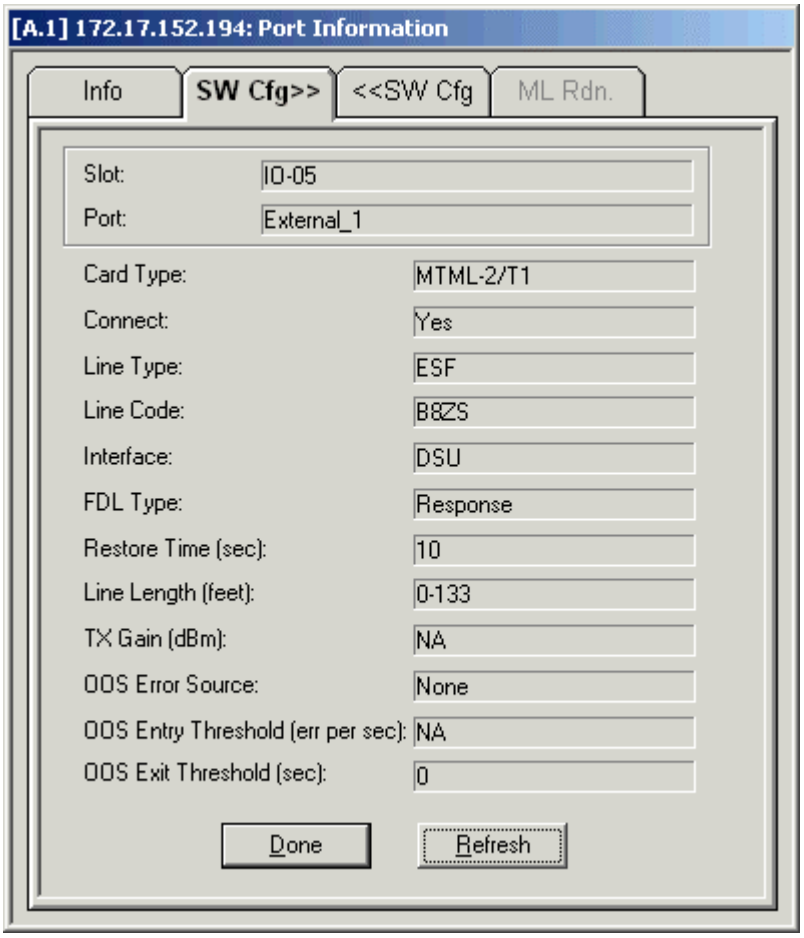


Figure 2-43. SW Cfg>> Tab MTML 2/T1

Table 2-26. SW Cfg>> Tab MTML 2/T1

Parameter	Possible Values / Remarks
Connect	Indicates whether the port should be considered in any of the Megaplex algorithms **No, Yes**
Line Type	**ESF, D4 (SF)**
Line Code	The line code parameter of the interface. **B8ZS**, **B7**, **TRANS**
Interface	Interface type **DSU, CSU**
FDL Type	The side of the FDL that the selected port is located. **Response** indicates user side, **Command** indicates PTT side
Restore Time (sec)	The time required to restore normal service after the end of a loss of synchronization condition **1, 10**
Line Length	Line length **0-133**, **134-266**, **267-399**, **400-533, 534-655**
TX Gain (dBm)	Attenuation value that brings the signal level closer to the expected repeater signal level on the cable (only applicable for T1 CSU cards) **0**, **7.5**, **15.0**, **22.5**

MTML-2/T1 << SW Cfg Tab

Table 2-27. <<SW Cfg Tab MTML2/T1

Parameter	Possible Values / Remarks
Signaling Profile	**1,2,3,4,5**
Idle Code (hex)	Hexadecimal code transmitted to fill idle (unused) time slots in frames transmitted through the selected port **0** to **FF** The following values are not allowed: 0, 8, 10, 12, 21, 24, 42, 49, 84, 92
CGA	Method used to signal the carrier group alarm (CGA) state to the other end of the selected link **None** - Non-transparent mode. When one of the links is in out-of-service state, the time slots carry the appropriate out-of-service code (data/voice OOS) to the other end of the link. **Trans** – When one of the links is in out-of-service state, the time slots carry the appropriate OOS code to the other end of the link. Signaling bits A and B are not forced into the OOS state. **Full** - Fully transparent mode. When one of the links is in out-of-service state, the state of the time slots and the state of the signaling bits does not change.

Table 2-28. <<SW Cfg Tab MTML2/T1 (Cont.)

Parameter	Possible Values / Remarks
Rx Gain	**Short Haul, Long Haul**
OOS Signal	State of the signaling bits when the link is in out-of-service (OOS) state. **Forced Idle** - Signaling bits A and B are idle when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also idle. **Forced Busy** - Signaling bits A and B are busy when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also busy. **Busy Idle** - Signaling bits A and B are busy for 2.5 seconds, then become idle until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are idle for 2.5 seconds before switching to busy state. **Idle Busy** - Signaling bits A and B are idle for 2.5 seconds, then become busy until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are busy for 2.5 seconds before switching to idle state.
Voice OOS (hex)	Voice out-of-service code transmitted on voice time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box. **00**-**FF** (hexadecimal).
Data OOS (hex)	Data out-of-service code transmitted on data time slots when the link is out-of-service. This value must be the same for both ports. To change the code, type the required code in the edit box. **00**-**FF** (hexadecimal).
Inband Mng	Identifier of inband management over the link **Off**, **FDL or TS0, Dedicated TS, Dedicated TS/PPP, Dedicated FR**
Inband Mng Rate (Kbps)	Data rate of the inband management. Options depend on Inband Mng **NA, 4, 64**
Inband Mng Rout Protocol	Protocol of Inband Mng. Options depend on Inband Mng **None, RIP2, Proprietary**

MTML-2/E1 cards

Megaplex 2100 supports the MTML-2/E1 card.

MTML-2/E1 SW Cfg>> Tab

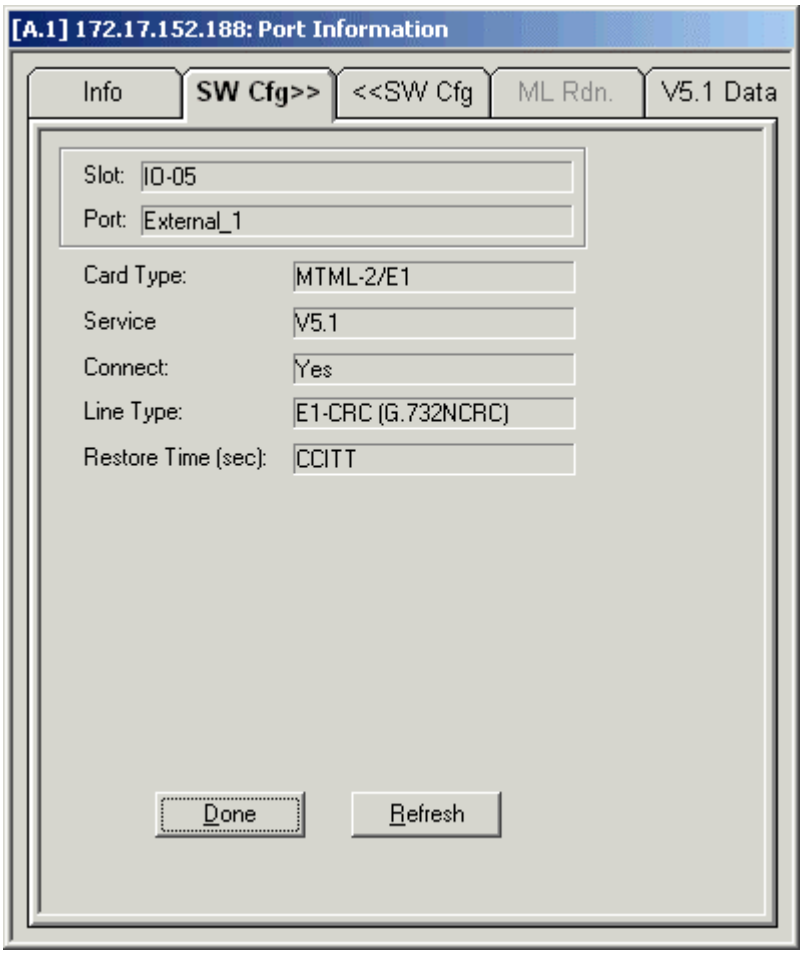


Figure 2-44. SW Cfg>> Tab MTML2/E1

Table 2-29. SW Cfg>> Tab MTML2/E1

Parameter	Possible Values / Remarks
Connect	Indicates whether the port should be considered in any of the Megaplex algorithms **No, Yes**
Line Type	The line type of the interface **E1-MF (G.732S), E1 (G.732N), E1-CRC (G.732NCRC), E1-CRC-MF (G.732SCRC)**
Restore Time (sec)	The time required to restore normal service after the end of a loss of synchronization condition **CCITT, 1, 10**

MTML-2/E1 << SW Cfg Tab

Table 2-30. <<SW Cfg Tab MTML2/E1

Parameter	Possible Values / Remarks
Idle Code (hex)	Hexadecimal code transmitted to fill idle (unused) time slots in frames transmitted through the selected port **0** to **FF**. ***Note**: The following values are not allowed: 0, 8, 10, 12, 21, 24, 42, 49, 84, 92*
Inband Mng	Identifier of inband management over the link **Off**, **FDL or TS0, Dedicated TS, Dedicated TS/PPP, Dedicated FR**
Inband Mng Rate (Kbps)	Data rate of the inband management. Options depend on Inband Mng **8, 16, 32, 64**
Inband Mng Rout Protocol	Protocol of Inband Mng. For Inband Mng =Dedicated TS/PPP or Dedicated FR: **None, RIP2, Proprietary**
Multi Frame Clock Source	Multi Frame Clock Source group is used to bypass signaling of PCM voice channels
Slot	Indicates whether the selected port's Tx multiframe is synchronized with the Rx multiframe of another port and its slot position. **Local**, **IO-1..IO-12** Slot must contain an MTML card. If the port is not connected to a TDM bus, this value is **Local**
Port	Port number in the Multi Frame Clock Source slot (only applicable for slot numbers IO-1..IO-12) **external-1, internal-1**

MTML-2/E1 Connect Parameters

Table 2-31. Connect Parameters – MTML-2/E1

Parameter	Possible Values / Remarks
Mediation	Enables time slot connection within the current Megaplex or to another Megaplex in the net: **Direct (Full)** - Time slot connection within the current Megaplex **Fractional -** Time slot connection to another Megaplex in the net
Connection	The connection group parameters are enabled only when Mediation=Direct
Connect Type	Type of connection: **TDM Service, TDM User**
Connect Mux	Megaplex in the net which is connected to the selected port
Connect Slot	Slot in the connected Megaplex that is connected to the selected port
Connect Port	Port in the connected Megaplex that is connected to the selected port

MTML-2/E1 V5.1 Parameters

➤ **To configure V.51 data parameters for an MTML-2/E1 external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...** followed by **V5.1...**
   The V5.1 Data dialog box appears.

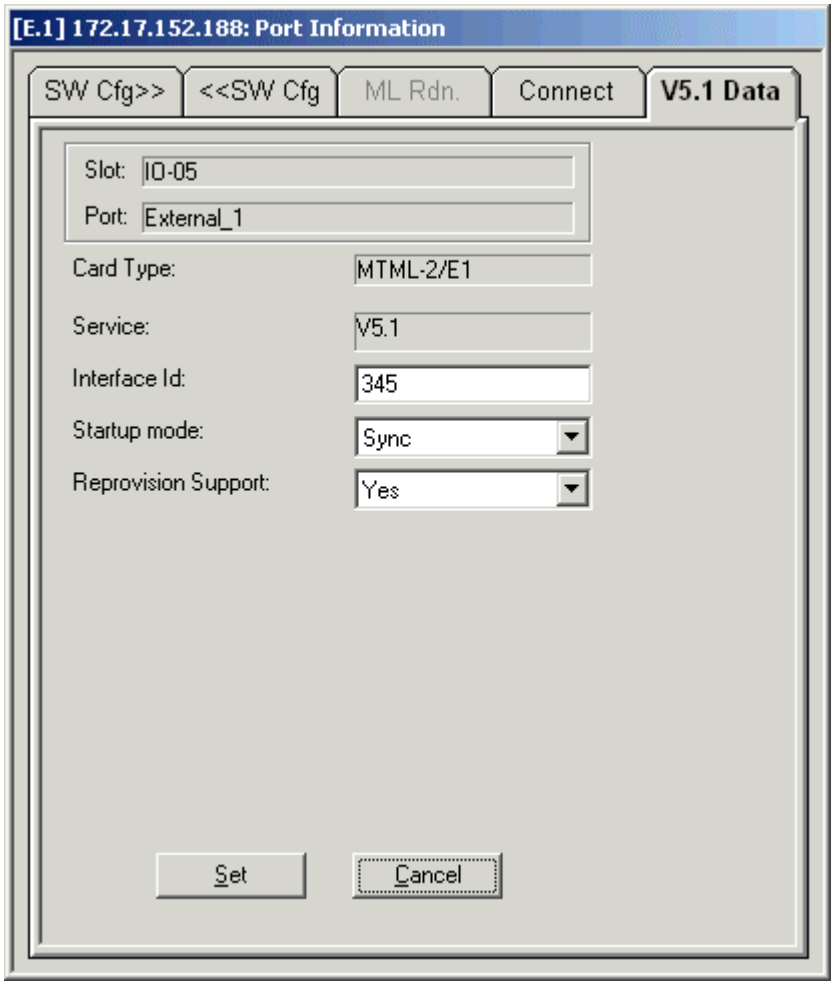


Figure 2-45. V5.1 Data - MTML2/E1

Table 2-32. V5.1 Data Parameters – MTML-2/E1

Parameter	Possible Values / Remarks
Service	V5.1
Interface ID	V5.1 Interface ID **00000000..16777215**
Startup Mode	Startup Mode **Sync, Async**
Reprovision Support	Reprovision Support **No**: reprovision is not supported **Yes**: reprovision is supported
Active Variant	Currently Active Variant Id. on this ML **0..127, None**
V5.1 State	Protocol State of the ML Active Variant **Not Defined**: V5.1 is not defined for this interface **Out Of Service**: V5.1 interface is Out-of-Service **Sys Start Up**: An Establish request arrived at the V5.1 interface **Wait For VID**: Variant and the Interface Id were requested during system start-up procedure **Activate PSTN**: Activation of the PSTN Data Link was requested during system start-up procedure **RES1**: PSTN restart procedure is in process **In Service**: V5.1 interface is in service **RES2**: V5.1 is in AN5 state (sends restart complete to all PSTN protocols and changes status to In-Service) **RES3**: V5.1 is in AN6 state (sends restart complete to all PSTN protocols and changes status to In-Service) **Wait Init**: This state is entered when the system's management is in In-Service state, Switch to a new Variant is received and V5.1 interface will not be restarted **Switch Over**: This state is entered when the system's management is in In-Service state, Switch to a new Variant is received and V5.1 interface will be restarted **Ctrl DL Rel1**: This state is entered when the system's management is in In-Service state and Release Indication is received Timer TC1 is running in this state **Ctrl DL Rel2**: This state is entered on reception of Release-Indication in 'RES3' state **Ctrl DL Rel3**:

MTML-2/E1 Redundancy Parameters

Table 2-33. Redundancy Parameters – MTML-2/E1

Parameter	Possible Values / Remarks
Redundancy Mode	ML redundancy mode **Dual Cable Parallel Tx:** ML card is connected by a separate cable to other Megaplexes **Y Cable**: Y Cable connects two MTML cards to two Megaplexes, through one cable (only applicable for same types CSU or DSU of MTML cards)
Primary Port	Primary port
Secondary Slot	Secondary slot
Secondary Port	Secondary port
Recovery Time (sec)	Minimum interval in seconds necessary to pass from time MTML card is switched (to current slot) before next ML switch can occur **1..99**

ML-IP Cards

Megaplex 2100/2104 supports the ML-IP card.

Note *ML–IP cards are supported for Agent SW Versions ≥8.xx.*

The port information parameters for the ML–IP are different for internal and external ports.

ML-IP Software Configuration Parameters

➤ **To display software configuration parameters for an ML-IP external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration menu**, select **Port Info...**
3. Click the SW Cfg tab.

   The Software Configuration dialog box appears.

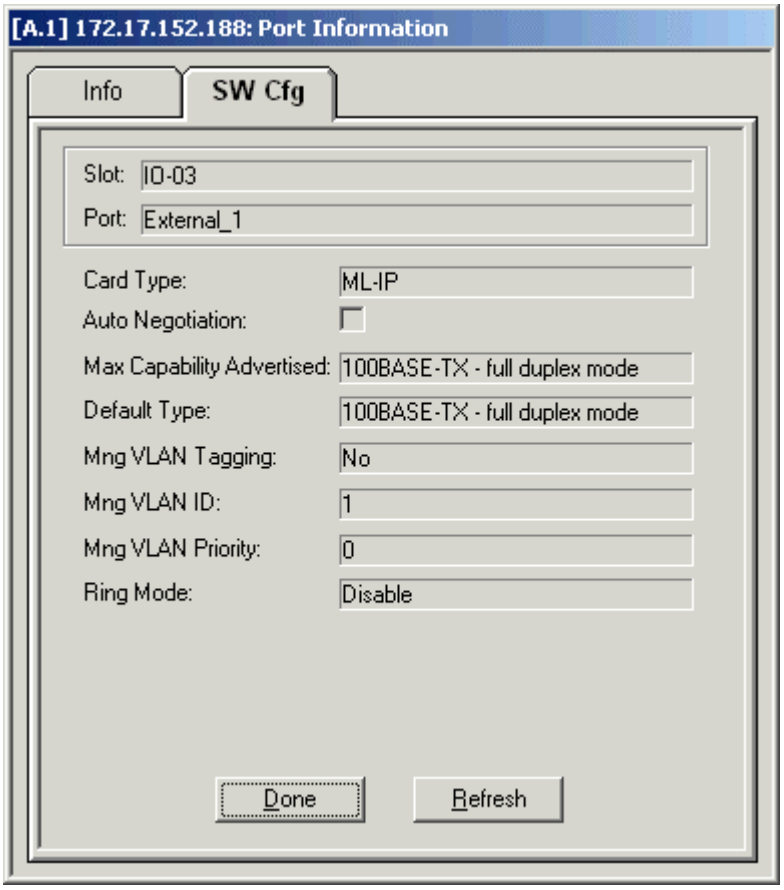


Figure 2-46. Software Configuration ML–IP (Ext. Port)

Table 2-34. Software Configuration –ML–IP (External Port)

Parameter	Possible Values / Remarks
Auto Negotiation	**Enable** (checked), **Disable** (unchecked)
Max Capability Advertised	Defines the maximum capabilities of the interface Only applicable when Auto Negotiation is enabled (checked) **10BASE-T half duplex mode** **10BASE-T full duplex mode** **100BASE-TX half duplex mode** **100BASE-TX full duplex mode**
Default Type	Only applicable when Auto Negotiation is disabled **10BASE-T half duplex mode** **10BASE-T full duplex mode** **10BASE-TX half duplex mode** **10BASE-TX full duplex mode**
Mng VLAN Tagging	Enable VLAN tagging **Yes**, **No**
Mng VLAN ID	VLAN ID **1..4000** This field exist only when Mng VLAN Tagging is Yes. This field does not exist for external–3 port.
Mng VLAN Priority	**0..7** This field exist only when Mng VLAN Tagging is Yes. This field does not exist for external–3 port.

➤ **To display software configuration parameters for an ML-IP internal port:**

1. In the **Card View**, click the required port.
2. From the **Configuration menu**, select **Port Info...**
3. Click the SW Cfg tab.

   The Software Configuration dialog box appears.

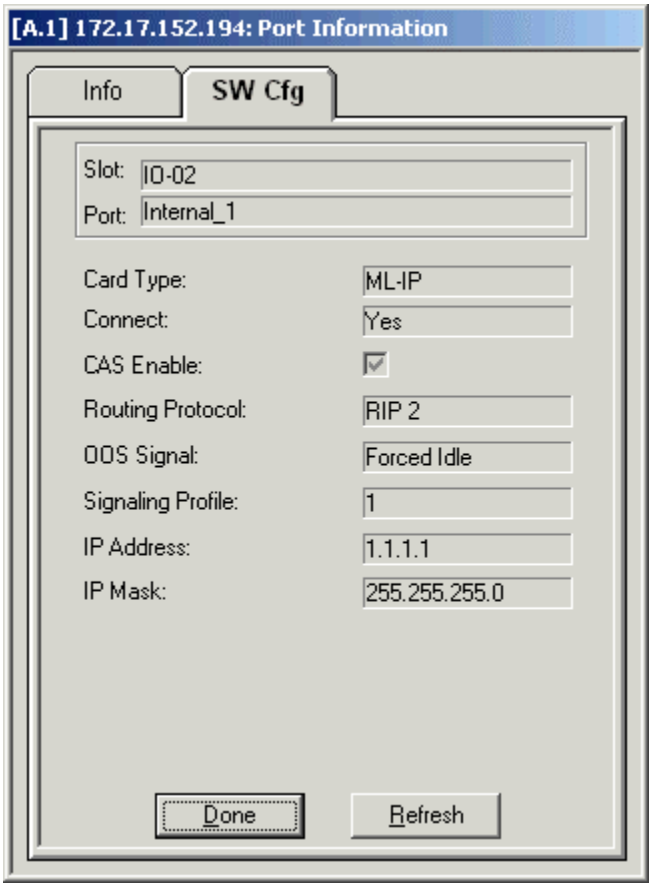


Figure 2-47. Software Configuration ML–IP (Int. Port)

Table 2-35. Software Configuration –ML–IP (Internal Port)

Parameter	Possible Values / Remarks
Connect	**No**, **Yes**
CAS Enable	Enables CAS **Enable** (checked), **Disable** (unchecked)
Routing Protocol	**None**, **RIP2**, **Proprietary RIP**
OOS Signal	State of the signaling bits when the link is in out-of-service (OOS) state: **Forced Idle** – Signaling bits A and B are idle when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also idle. **Forced Busy** - Signaling bits A and B are busy when the link is in out-of-service state. In addition, if the line type is ESF, signaling bits C and D are also busy. **Busy Idle** - Signaling bits A and B are busy for 2.5 seconds, then become idle until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are idle for 2.5 seconds before switching to busy state. **Idle Busy** - Signaling bits A and B are idle for 2.5 seconds, then become busy until the out-of-service state ends. In addition, if the line type is ESF, signaling bits C and D are busy for 2.5 seconds before switching to idle state.
Signalin Profile	**1**, **2**, **3**, **4**, **5**
IP Address	IP Address
IP Mask	IP Mask

Displaying TS (Time-Slot) Assignments – ML-IP Internal Port

The **TS Assignment** command allows you to display time slot assignments for the ML-IP internal port.

➤ **To display time slot assignments for the ML-IP internal port:**

1. In the **Agent mode Card View**, click the ML-IP internal port.
2. From the **Configuration** menu, select **TS Assignment.**

   The Time Slots Table appears (*Figure 2-53*).

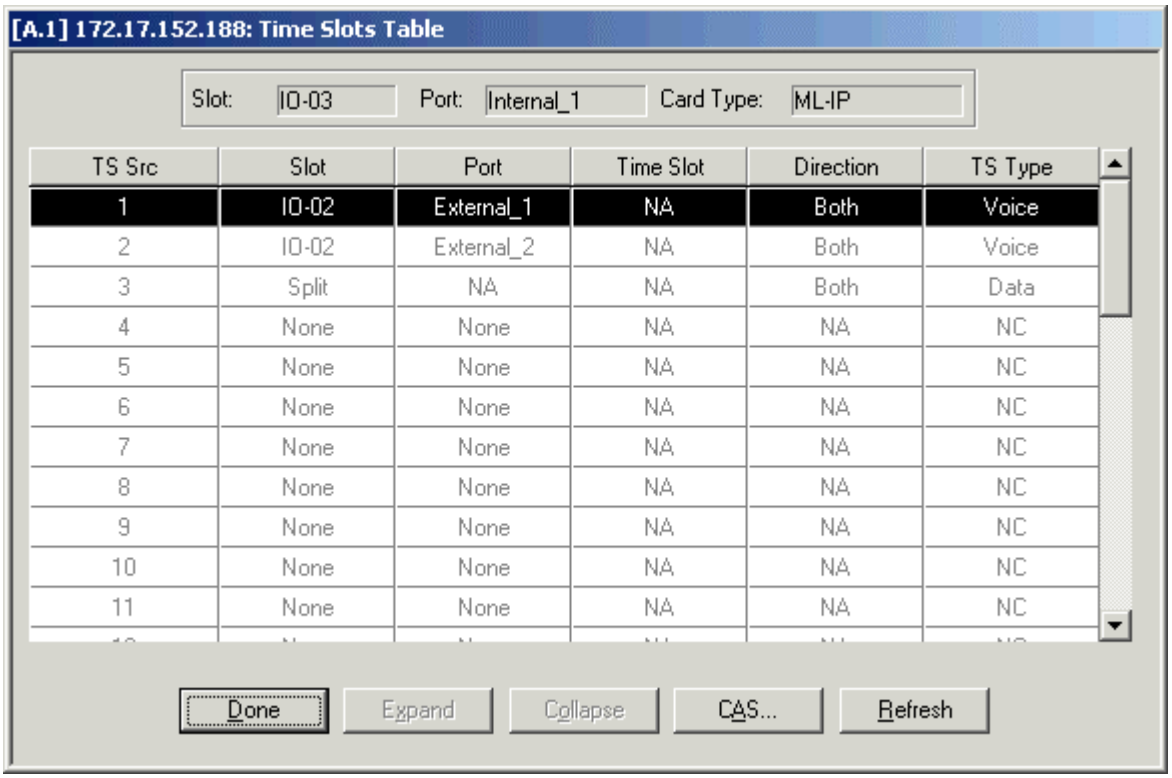


Figure 2-48. Time Slots Table

Table 2-36. Time Slots Parameters

Parameter	Possible Values / Remarks
Slot	Slot in which the selected card is inserted **IO-1** to **IO-12**
Port	Number of the selected port **external-1**, **external-2** or **internal-1**
Card Type	Type of the selected card All **MTML** cards
TS Src	Index number of the selected time slot For T1 link: **1..24** For E1 link: **1..31**
Slot	Destination card slot in the current MP-2100 **None**, **IO-1..IO-12**, **Split**

Table 2-37. Time Slots Parameters

Parameter	Possible Values / Remarks
Port	Destination port in the destination slot. Options depend on the available ports on the installed IO card. **None**, **NA**, **external-1..external-12**, **Internal-1..Internal-13**
Time Slot	Destination time slot for the selected time slot in the current Megaplex. This parameter is relevant if the destination slot contains an MTML card. Assigned time slots are checked during sanity checks. For T1 link - **None**, **1** to **24** For E1 link - **None**, **1** to **31**
Direction	**NA**, **Tx**, **Rx**, **Both**, **BcastSrc**, **BcastDst**
TS Type	**NC**, **Data**, **Voice**, **Mng**

ML-IP CAS Parameters

CAS (Channel Associated Signaling) parameters can be displayed.

➤ **To display CAS parameters for an ML-IP internal port:**

- Select an entry in the Time Slots Table (*Figure 2-53*), click <**CAS**>.

The CAS dialog box appears (*Figure 2-49*).

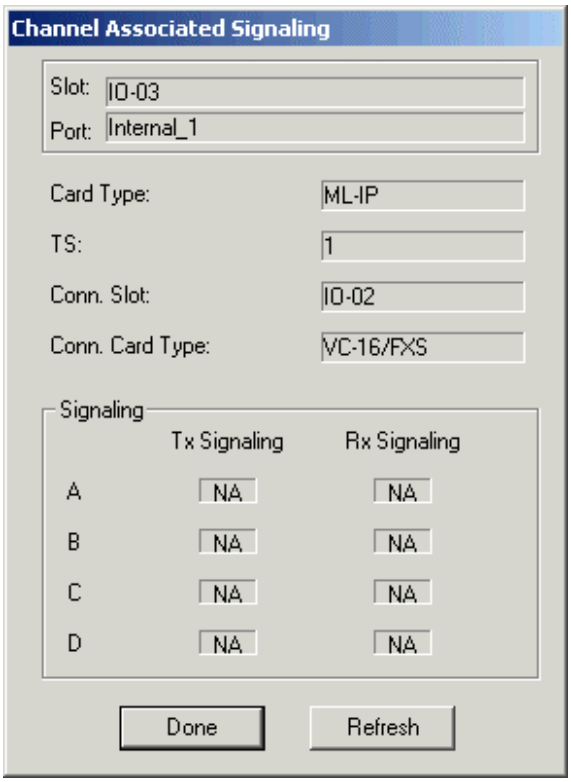


Figure 2-49. ML–IP CAS (Internal Port)

ML-IP R2 TS Status Parameters

➤ **To display R2 TS Status for an ML-IP internal port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **R2 TS Status…**
   The Port R2 TS Status dialog box appears.

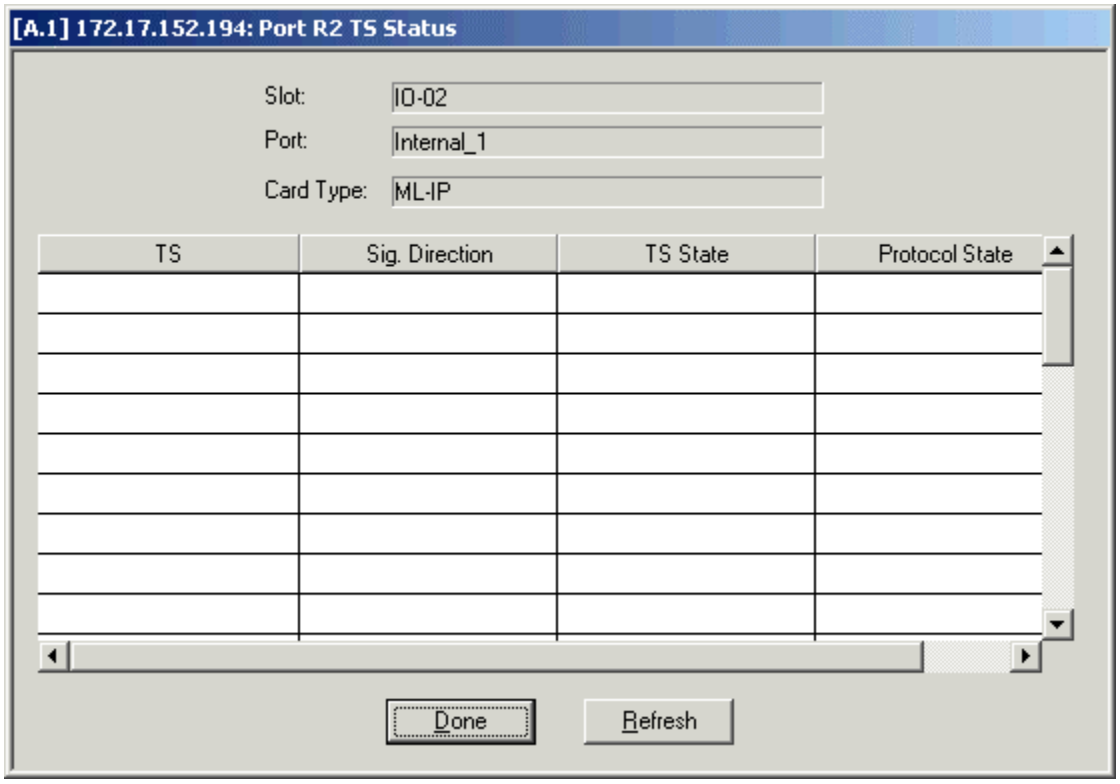


Figure 2-50. R2 TS Status– ML–IP (Internal Port)

ML-IP Bundle Parameters

➤ **To display bundle parameters for an ML-IP internal port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Bundles...**
   The Bundles dialog box appears.

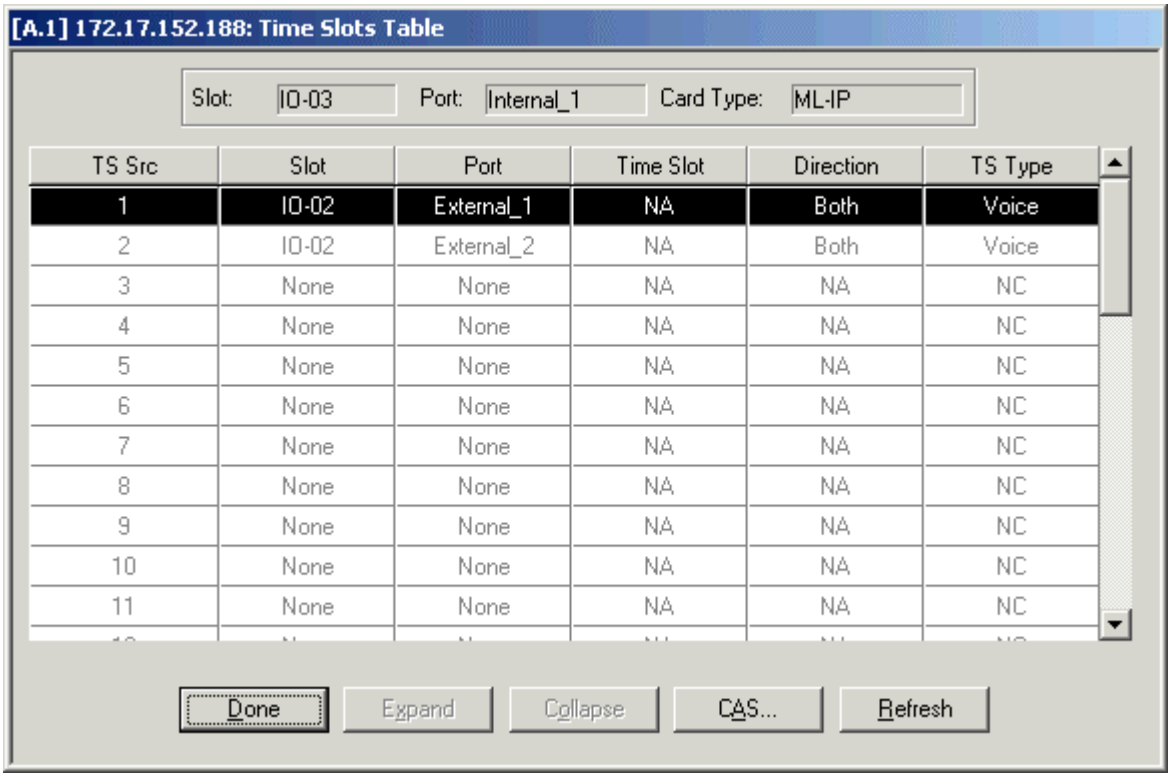


Figure 2-51. Bundles Dialog Box– ML–IP (Int. Port)

VC Cards

➤ **To display software configuration parameters for a VC external port:**

1. In the **Card View**, click the required port.
2. From the **Configuration** menu, select **Port Info...**
3. Click the SW Cfg>> Tab.

   The Software Configuration dialog box appears.

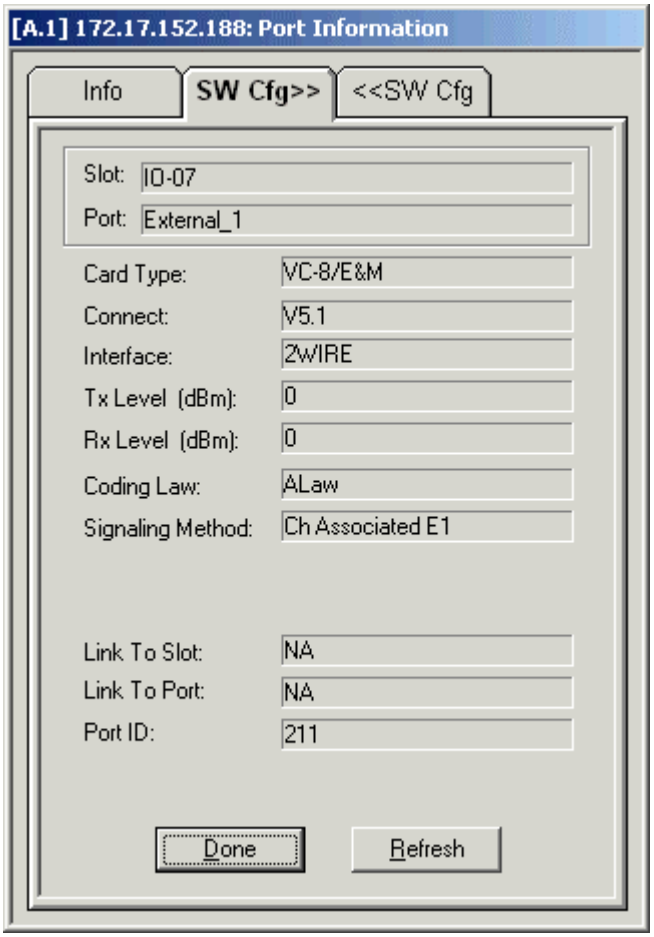


Figure 2-52. Software Configuration – VC Cards

Table 2-38. VC Cards Software Configuration Parameters

Parameter	Possible Values / Remarks
Connect	Indicates whether the port should be considered in any of the Megaplex algorithms. **No, Yes**.
Interface	For E&M, MTVC-2, VC-16A cards: **2WIRE, 4WIRE** For others: 2WIRE ***Note:*** *Interface is the same for all card ports except for VC-8, VC-16 and VC-16A cards where it can be different for each port.*
Tx Level (dBm)	Transmit level in steps of 1 or 0.5 dBm **–17...8** ***Note:*** *Tx Level value can be offset by a certain value if Offset 1 is selected in the System Information dialog box.*
Rx Level (dBm)	Receive level in steps of 1 or 0.5 dBm **–23...2** ***Note:*** *The Rx Level value can be offset by a certain value if Offset 1 is selected in the System Information dialog box.*

Table 2-39. VC Cards Software Configuration Parameters

Parameter	Possible Values / Remarks
Coding Law	**Alaw, Ulaw** ***Note:*** *Coding Law is the same for all card ports.*
Signaling Method	**No Signaling, RobbedBitMultiFrame, RobbedBitFrame, Ch Associated E1** ***Note:*** *Options vary depending on card. Signaling Method is the same for all card ports. It does not exist for MTVC-2 cards.*
Signaling Profile	**1, 2, 3, 3 Reverse-Polarity, 3 Metering–Pulse, 4,** **NA (when Signaling Method=No Signaling)** ***Note:*** *Only for VC-6 family cards. Options vary depending on card. Signaling Profile is the same for all card ports.*
Encoding Mode	**PCM, ADPCM** ***Note:*** *Only for VC-6A family, VC-8, VC-16, VC-16A cards. Encoding Mode is the same for all card ports.*
Analog Signaling	For VC-6A cards: **Loop–Start** For VC-6AG cards (same for all card ports): **Loop–Start** For VC-8 (same for all card ports): **Loop–Start, Wink Start** VC-16 cards (same for every adjacent 8 ports): **Loop–Start, Ground–Start, Wink Start**
Meter Rate	For VC-6A/FXO, VC-6A/FXS cards: When Signaling Profile=3, 3 Metering Pulse: **16, 12** else **NA** For VC-8/FXO, VC-8/FXS, VC-16/FXO, VC-16/FXS cards: **16, 12** ***Note:*** *Meter Rate is the same for all card ports. Some versions of VC–8/FXO, VC–16/FXO cards do not support Meter Rate. An alarm is issued if 12 or 16 is selected.*
E&M Type	For VC-8/E&M, VC-16/E&M cards: **Type 1, Type 2, Type 3, SSDC5** ***Note:*** *E&M Type is the same for every 4 adjacent ports (1..4, 5..8, 9..12, 13..16).*
Signaling Feedback	For VC-8/FXO, VC-16/FXO cards: **No, Yes** ***Note:*** *Signaling Feedback is the same for every 8 adjacent ports (1..8, 9..16).*
Remote Type	Only for VC-6A/4LB cards. **LB, PBX**
Conversation Time (min)	Only for VC-6A/4LB cards. **2, 3, 5, Unlimited**
Link To Slot	**IO-1..IO-12, Multiple** Only slots containing ML cards are available for selection.
Link To Port	**External-1..External-2, Internal-1, Multiple** (when Link to Slot=Multiple)

Displaying TS (Time-Slot) Assignments

The **TS Assignment** command allows you to display time slot assignments for a specific port.

➤ **To display time slot assignments of a selected port:**

1. In the **Agent mode Card View**, click the required external-1 port.
2. From the **Configuration** menu, select **TS Assignment.**

   The Time Slots Table appears.

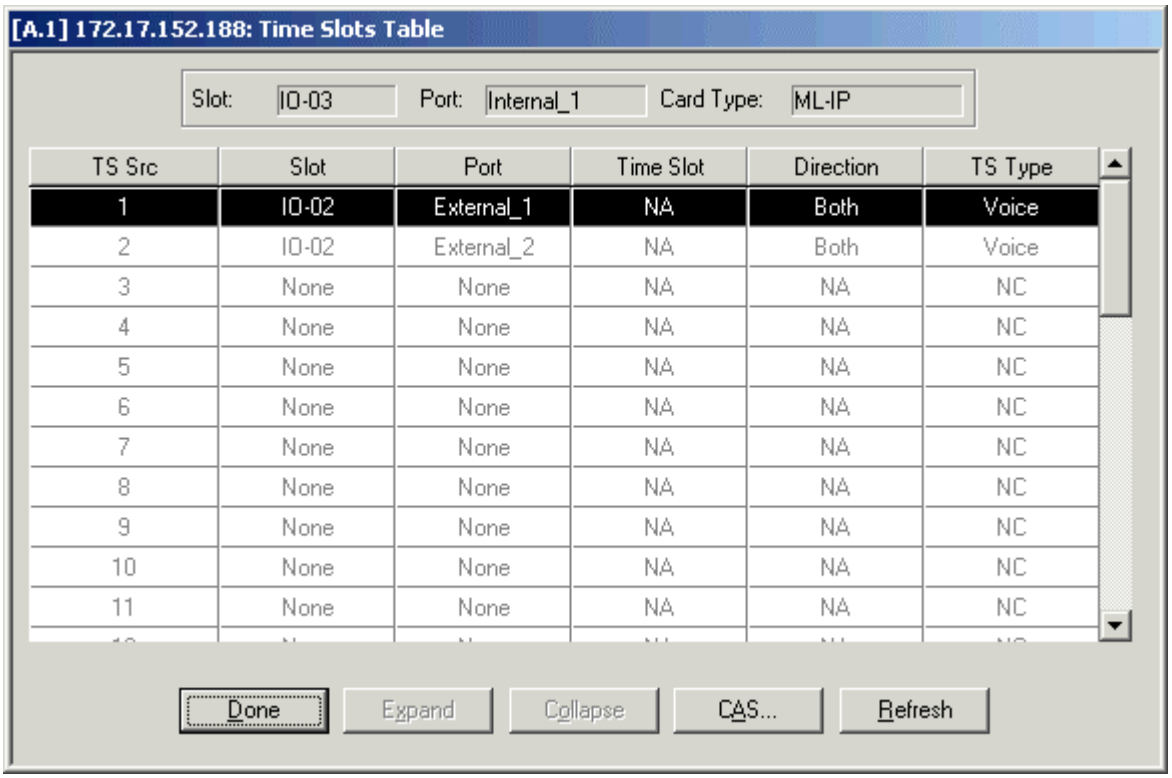


Figure 2-53. Time Slots Table

Table 2-40. Time Slots Parameters

Parameter	Possible Values / Remarks
Slot	Slot in which the selected card is inserted **IO-1** to **IO-12**
Port	Number of the selected port **external-1**, **external-2** or **internal-1**
Card Type	Type of the selected card All **MTML** cards
TS Src	Index number of the selected time slot For T1 link: **1..24** For E1 link: **1..31**
Slot	Destination card slot in the current MP-2100 **None**, **IO-1..IO-12**, **Split**
Port	Destination port in the destination slot. Options depend on the available ports on the installed IO card. **None**, **NA**, **external-1..external-12**, **Internal-1..Internal-13**
Time Slot	Destination time slot for the selected time slot in the current Megaplex. This parameter is relevant if the destination slot contains an MTML card. Assigned time slots are checked during sanity checks. For T1 link - **None**, **1** to **24** For E1 link - **None**, **1** to **31**
Direction	**NA**, **Tx**, **Rx**, **Both**, **BcastSrc**, **BcastDst**
TS Type	**NC**, **Data**, **Voice**, **Mng**

Split Time Slot

In MTML card ports, the time slots may be split into smaller parts so that different bits are connected to different slots and/or ports. If a time slot is Split, you can expand the table to view the connections of the time slot's bits.

➤ **To view the connections of a split time slot's bits:**

- Click an entry whose slot is **Split** and click <**Expand**> or double-click the TS Src or Slot column of an entry whose slot is Split.

  The Time Slots Table displays eight additional rows (one for each bit) directly under the selected time slot.

➤ **To return to the Time Slot Table's normal view:**

- Click a *Bit* entry and click <**Collapse**> or double-click a *Bit* entry.

2.9 Port Level Diagnostic Tests

The Megaplex supports local/remote loopback testing and BERT testing. The Diagnostics Testing function is available for all Megaplex-supported ports except:

- External port of TRE cards
- Internal ports of HS-U/1, HS-U/I and HS-S.

Note *The Diagnostics Port Testing function is enabled when the following conditions exist and Update operation succeeds:*
ML Cards:
E1: *Connect' = Yes AND Line Type = E1-CRC(G.732NCRC)/E1-CRC-MF(G.732SCRC)*
T1*: Connect' = Yes AND Line Type = ESF*
OR
For other IO cards: *Connect = Yes, and a TSA connection with ML card exists*

Running Diagnostic Tests

➤ **To enter the diagnostic test function:**

1. In the **Agent Card View**, click a port.
2. From the **Diagnostics** menu, select **Test…**
   The Testing dialog box appears.

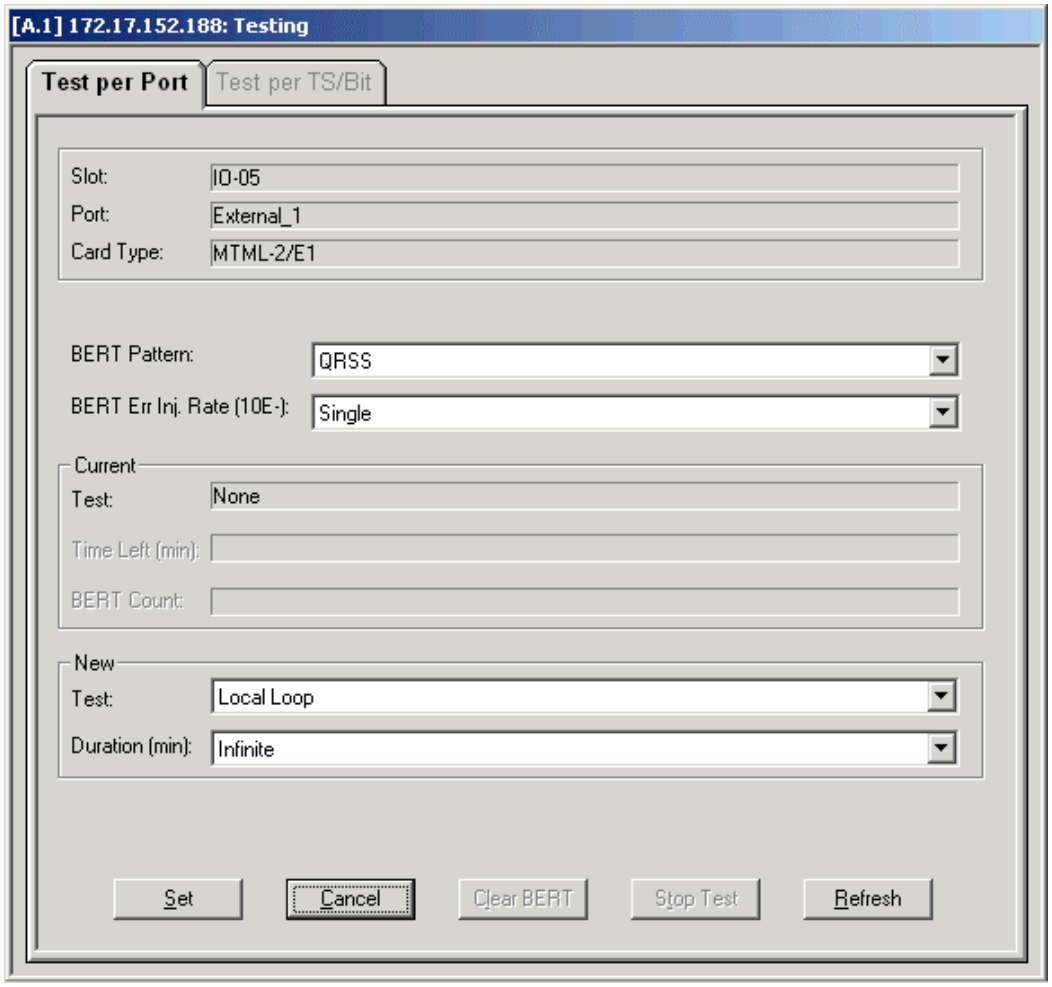


Figure 2-54. Testing Dialog Box (Test per Port Tab)

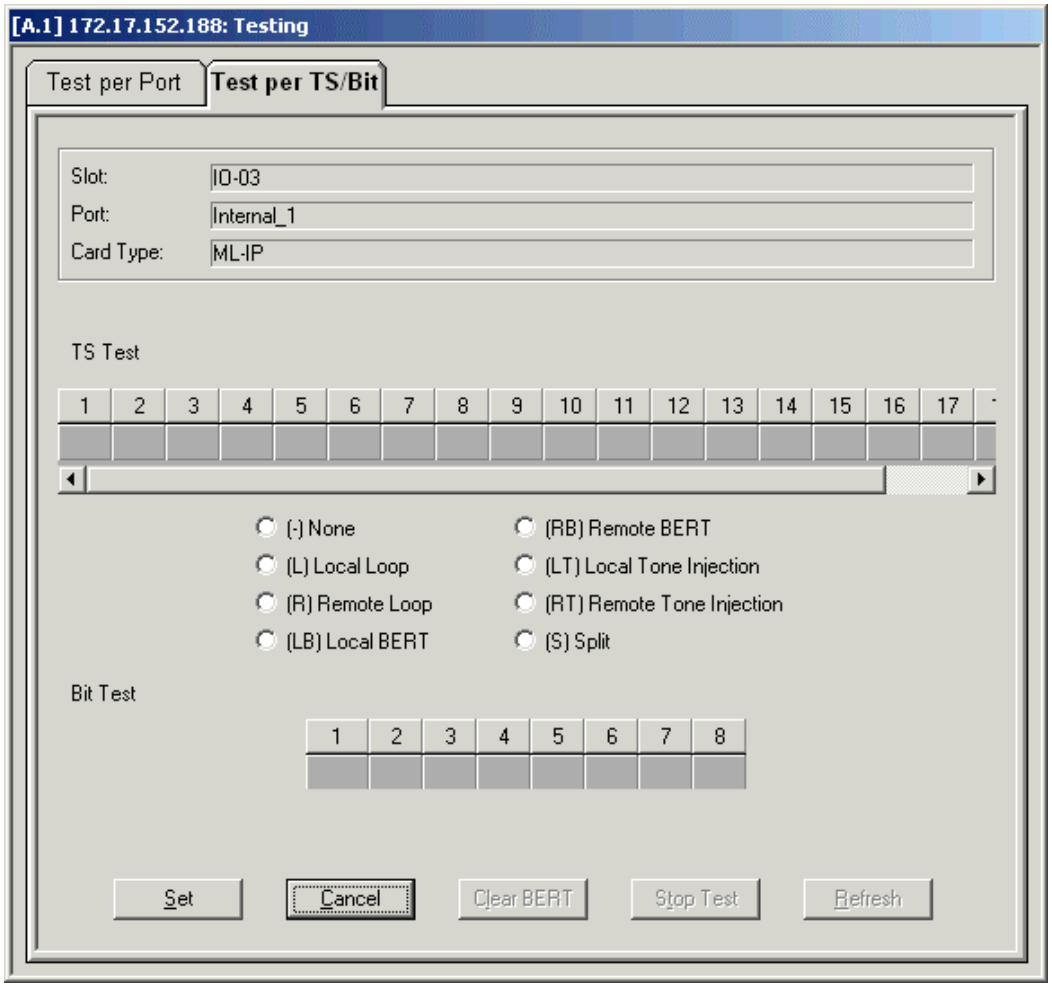


Figure 2-55. Testing Dialog Box (Test per TS/Bit Tab)

The Testing dialog box contains card and port identification at the top and two tabs: Test per Port and Test per TS/Bit.

Table 2-41. Testing Parameters (Test per Port Tab)

Parameter	Possible Values / Remarks
Slot	Slot number of the selected card **IO-1** to **IO-12** For MP-2104: **IO-1** to **IO-5**
Port	Selected port **external-1** to **external-12**, **internal-1** to **internal-12**
Card Type	Type of card assigned to the selected slot
BERT Pattern	**QRSS, 2E23–1, 2E20–1, 2E15–1, 2047, 511, 63, 1M-7S, 1S-7M, Alternate, Mark, Space**
BERT Err Inj. Rate (10E-)	The rate of BERT injection: **Single, 1, 2, 3, 4, 5, 6, 7**
Current	The **Current** section shows the current testing status in the selected port. In addition, you can stop a currently running test
Test	Currently running test. The Megaplex supports the following tests: **Local Loop, Tone Injection, Remote Loop, External Initialization, Local Loop, Local and Remote Loop, BERT , Remote Loop on Remote Unit, Remote Loop on External Unit, Remote Loop on Remote Unit, BERT**
Time Left	Time remaining, in minutes, until the end of the current test
BERT Count	Number of BERT errors counted during current BERT test (applicable only when BERT is running on the selected port)
New	The **New** section allows you to activate a diagnostic test if no test is currently running on the selected port
Test	Name of test that you want to initiate. The available options are the same as the Current Test possible values. If diagnostic testing is not possible on the selected port, **None** appears in this field
Duration	Desired duration of the new test. Some ports require a time limit to prevent infinite execution. If the selected port requires a time limit, the default duration appears in this field when the Testing dialog box initially appears. **1..30** minutes Other ports do not require a time limit, but you may set a time limit anyway: **infinite** (no limit), **1..30**

Table 2-42. Testing Parameters (Test per TS/Bit Tab)

Parameter	Possible Values / Remarks
Slot	Slot number of the selected card **IO-1** to **IO-12** For MP-2104: **IO-1** to **IO-5**
Port	Selected port **external-1** to **external-12**, **internal-1** to **internal-12**
Card Type	Type of card assigned to the selected slot
TS Test	None, (L) Local Loop, (R) Remote Loop, (LB) Local BERT, (RB) Remote BERT, (LT) Local Tone Injection, (RT) Remote Tone Injection, (S) Split **Note:** *When Split is selected, the tests are per bit. Otherwise, the tests are per TS.*
Bit	1..8

➤ **To activate a test:**

1. In the **New** section, select a test.
2. Select duration for the new test.
3. Click <**Set**>.

➤ **To stop a currently running test:**

- Click <**Stop Test**>.

  The Megaplex stops running the current test. This command is not applicable for Ext Init Local Loop tests.

➤ **To reset the BERT counter to zero (if a BERT test is currently running):**

- Click <**Clear Bert**>.

  The BERT counter restarts at zero, even if the BERT test continues.

BERT Counters

➤ **To inject errors:**

1. In the **Agent Card View**, click a port.
2. From the **Diagnostics** menu, select **Bert Counters…**

   The Bert Counters dialog box appears (***Error! Reference source not found.***).
3. Click <**Polling Interval**>.

   The Polling Interval dialog box appears. Select the desired polling interval and click <**Set**>.
4. Click <**Start**>.

   The Errors appear in the BERT Log.

➤ **To print the BERT Log:**

1. In the **Agent Card View**, click a port.
2. Do one of the following:

- From the **Diagnostics** menu, select **Print Log…**

  OR

- After injecting errors (above) in the Bert Counters dialog box (***Error! Reference source not found.***), click <**Print Log**>.

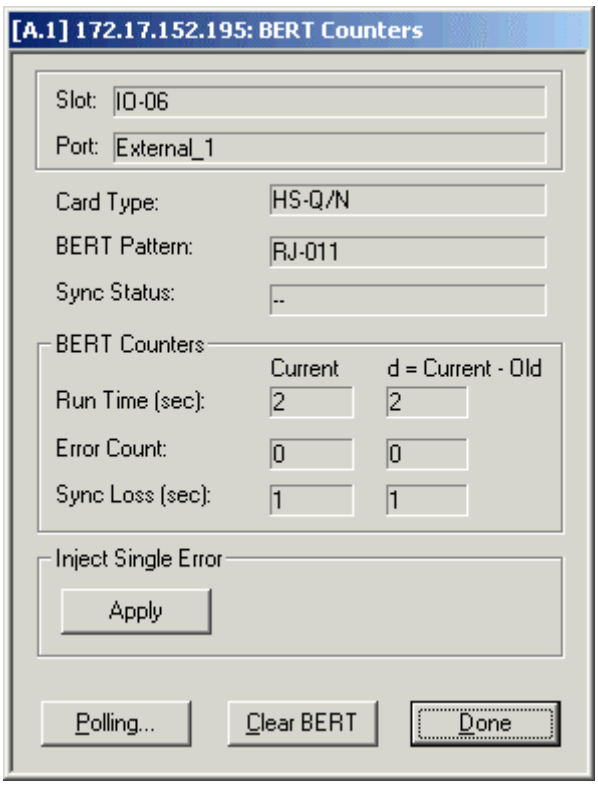


Figure 2-56. BERT Counters Dialog Box

2.10 Port Level Fault Operations

In the Port Level, you can display and clear port-related alarms.

Displaying Port Alarms

➤ **To display a list of all active port alarms:**

1. In the **Card View**, click a port.
2. From the **Fault** menu, select **Alarms** and **Display**

   The Port Active Alarm List appears.

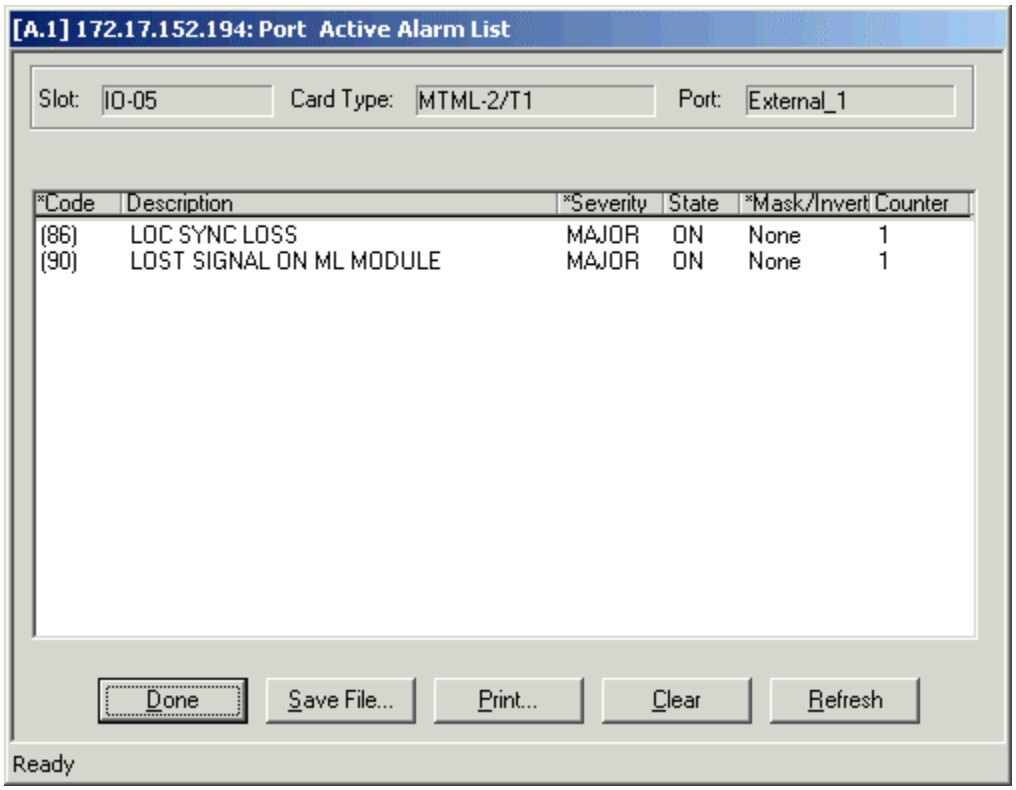


Figure 2-57. Port Active Alarm List Dialog Box

The Port Active Alarm List displays active alarms for the selected port. The list begins from either Megaplex startup or from the last time the alarm list was cleared.

Table 2-43. Port Active Alarm List Parameters

Parameter	Possible Values / Remarks
Code	Code number of the alarm
Description	Brief description of the alarm
Severity	Alarm severity
Status	Type of alarm **Off** – No alarms or events in port. **Event** – At least one alarm event (including state on, off events) since the last Alarms>Clear operation **Major** – At least one active major alarm since the last Alarms>Clear operation **Minor** – At least one active minor alarm since the last Alarms>Clear operation
Mask/Invert	Indicaties whether the alarm is masked or inverted
Counter	Number of times that this alarm occurred since either Megaplex startup or the last time the alarm list was cleared
[Save File…]	Saves alarms list in a file. In the Save dialog box, select a path, type a filename and Click <**OK**>. RADview adds the extension **.alr* to the filename.
[Clear]	Clears all active alarms. Confirmation is not required.

Clearing Port Alarms

The **Alarms>Clear** command clears active port alarms from the Port Active Alarms list:

➤ **To clear active port alarms from the Port Active Alarms List:**

- From the **Fault** menu, select **Alarms** and **Clear**.

  No user confirmation is requested.

2.11 Displaying Port Statistics

You can view statistical information for the external-1 port of an MTML card. RADview displays statistics in dialog boxes and graphs.

Setting the Polling Interval

RADview updates displayed statistical data by polling the Megaplex at set intervals. The Polling Interval command allows you to set the number of seconds between polls.

➤ **To set the polling interval:**

- From the **Statistics** menu, select **Polling Interval…**

  The Polling Interval dialog box appears.

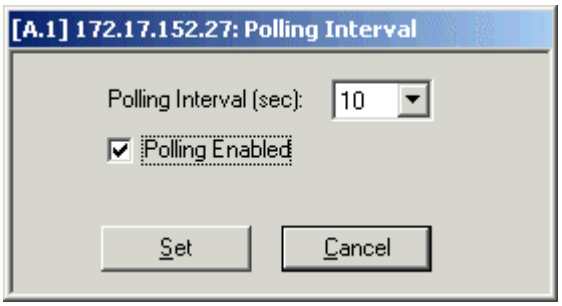


Figure 2-58. Polling Interval Dialog Box

Table 2-44. Polling Interval Parameters

Parameter	Possible Values / Remarks
Polling Interval	Number of seconds between polls Applicable for FDL messages and Current Data dialog boxes and graphs
Polling Enable	√ enables polling when a Statistics dialog box is open After each poll, RADview automatically updates the information in the dialog box. If polling is disabled, RADview does not automatically update a Statistics dialog box. ***Note:*** *Polling is always enabled when a Statistics graph is open.*

Displaying LAN Statistics

The **LAN Statistics** command allows you to view current statistics for ML-IP ports.

➤ **To display LAN Statistics:**

1. Select an ML-IP port.
2. From the **Statistics** menu, select **LAN Statistics...**

   The LAN Statistics dialog box appears.

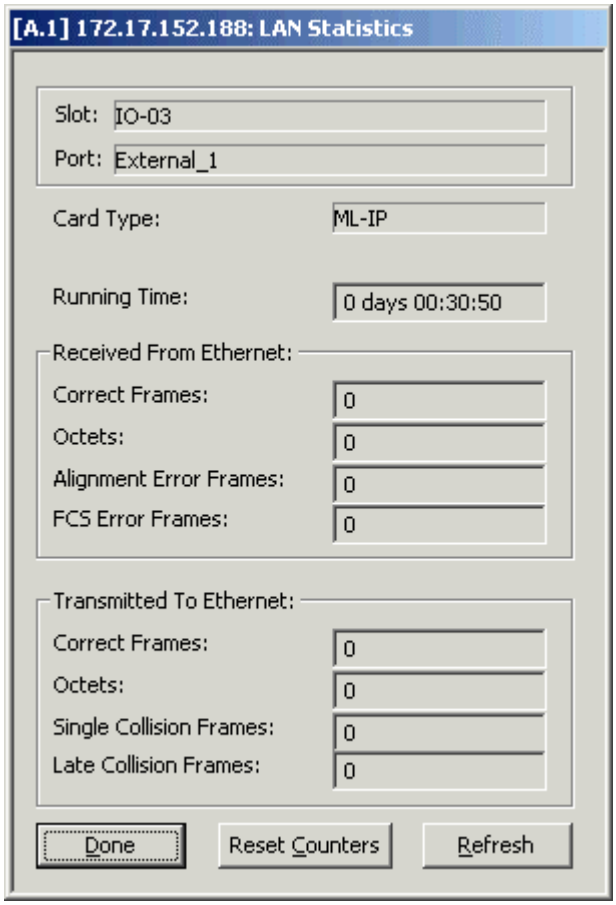


Figure 2-59. LAN Statistics Dialog Box

Displaying Current Data

The **Current Data** command allows you to view current statistics for MTML-2/T1 (CSU), MTML-2/T1 or E1 (DSU) and MTML-2/E1 (LTU) ports. RADview displays the statistics in table format and graph format.

Displaying a Current Data Table

The Current Data Table is only applicable to MTML-2 ports in which:

- Active Status = Online or Online Redundancy
- Line Type = ESF (MTML-2/T1) or Line Type = G.732NCRC or G.732SCRC (MTML-2/E1)

➤ **To display the current data in table format:**

- From the **Statistics** menu, select **Current Data** followed by **Table...**.

  The Current Data dialog box appears.

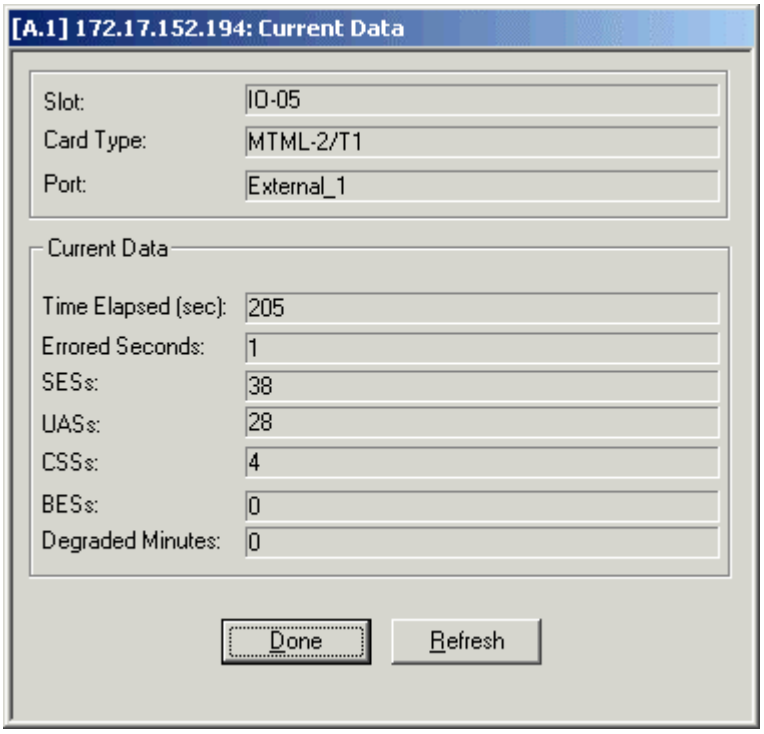


Figure 2-60. Current Data Dialog Box

The Current Data dialog box shows the amount of time that error(s) exist(s) in the current measurement interval. Each interval is 15 minutes (900 seconds).

Table 2-45. Current Data Parameters

Parameter	Possible Values / Remarks
Slot	Slot number of the selected card **IO-1 – IO-12** For MP-2104: IO-1 to IO-5
Card Type	Type of card inserted into the selected slot **MTML-2/T1(CSU)**, **MTML-2/T1(DSU)**, **MTML-2/E1(DSU)**, **MTML-2/E1(LTU)**
Port	Selected port **external-1**
Time Elapsed	Number of seconds since the beginning of the current interval
Errored Seconds	Number of seconds in the current interval in which an event or alarm occurred
SESs	Severe Errored Seconds. Number of seconds in the current interval in which at least 320 CRC events or one OOF event occurred
UASs	Unavailable Seconds. Number of seconds in the current interval in which a failed signal state exists. A failed signal state occurs after 10 consecutive severe errored seconds. This state is cleared only after the Megaplex processes 10 consecutive seconds of data without an SES
CSSs	Controlled Slip Seconds. Number of seconds in the current interval in which at least one controlled SLIP event occurred
BESs	Bursty Errored Seconds. Number of seconds in the current interval in which 2 - 319 CRC events occurred
Degraded Minutes	Number of minutes in the current interval in which the bit error rate (BER) exceeded $1x10^{-6}$

If Statistics polling is enabled (see *Setting the Polling Interval*), RADview updates the data in the Current Data dialog box after each polling interval.

Displaying a Current Data Graph

The Current Data Graph is only applicable to MTML-2 ports in which:

- Active Status = Online or Online Redundancy
- Line Type = ESF (MTML-2/T1, MTML-F/T1) or Line Type = G.732NCRC or G.732SCRC (MTML-2/E1. MTML-F/E1)

➤ **To display the current data in graph format:**

- From the **Statistics** menu, select **Current Data** followed by **Graph**…

  The Current Graph dialog box appears.

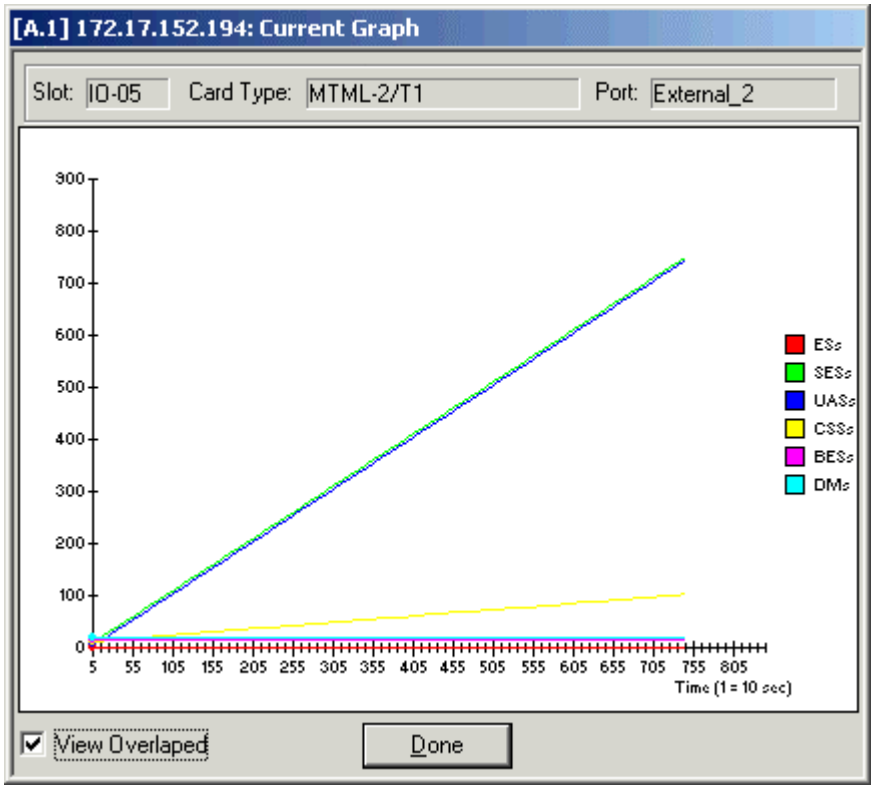


Figure 2-61. Current Graph

The Current Graph shows Megaplex performance statistics in the current measurement interval. Each interval is 15 minutes (900 seconds). Lines of various colors represent a measurement item. A legend on the right side of the dialog box indicates the measurement items and their respective color indications.

For example, *Figure 2-61* shows that no errors occurred during the current interval.

Table 2-46. Current Graph Parameters

Parameter	Possible Values / Remarks
ESs	Errored Seconds. Number of seconds in the current interval in which an event or alarm occurred
SESs	Severe Errored Seconds. Number of seconds in the current interval in which at least 320 CRC events or one OOF event occurred
UASs	Unavailable Seconds. Number of seconds in the current interval in which a failed signal state exists. A failed signal state occurs after 10 consecutive severe errored seconds. This state is cleared only after the Megaplex processes 10 consecutive seconds of data without an SES
CSSs	Controlled Slip Seconds. Number of seconds in the current interval in which at least one controlled SLIP event occurred
BESs	Bursty Errored Seconds. Number of seconds in the current interval in which 2 - 319 CRC events occurred
DMs	Degraded Minutes. Number of minutes in the current interval in which the bit error rate (BER) exceeded $1x10^{-6}$

The horizontal axis indicates the time elapsed (in seconds) since the beginning of the current measurement interval. When a new interval begins, RADview displays a new graph.

The vertical axis indicates the various values of the measurements. The origin of the axis represents 0. The highest point represents the maximum value of the measurements (maximum = 899).

View Overlap

In some cases, various lines on the graph may indicate identical values. The View Overlap function allows you to see all the lines on the graph, regardless. If View Overlap is disabled, only one of the lines indicating an identical value is seen.

➤ **To activate the View Overlap function:**

- Click the **View Overlap** checkbox so that **x** appears.

You can now see all the lines on the graph, even if some indicate identical values.

Displaying Intervals Data

You can view a selected 15-minute interval or cumulative totals of the data from the previous 24 hours.

➤ **To view data from a selected interval from the previous 24 hours:**

- From the **Statistics** menu, select **Intervals Data** followed by **Table…**

  The Intervals Data Dialog Box appears. This dialog box shows the number of intervals in the last 24 hours in which valid data that was collected by the Megaplex.

The data parameters are the same as for the Current Data, except that the performance data relates to the selected interval (**Interval No.**). The data may also be displayed as a graph.

➤ **To view data from a selected interval from the previous 24 hours on a graph:**

- From the **Statistics** menu, select **Intervals Data** followed by **Graph…**

  The Intervals Graph Dialog Box appears. The data parameters are the same as for the Current Graph, except that the performance data relates to the selected interval (Interval No.).

2.12 Release Notes

Upgrading Software Version

When performing Software Upgrade of the agent, remove the **old** Database by deleting the icon from the map and adding a new one.

VF-PBX Family Limitations

It is not recommended to use VF-PBX family cards on the MP2104 hub because they have a limited power supply module. The Power Supply provides 6A while the VF-PBX cards need 2.4A for Master and 2.1A for Slave. Since there are other cards in the hub (CL, ML) only one VF-PBX card can be used.

Bi-directional Bypass

In order to remove Bi-directional Bypass between 2 ML ports in TSA which are configured with 'Direction' =Both (for two entries, one for each port), it is necessary to remove both entries. In addition, in order to change this Bypass to Uni-directional, it is necessary to change the direction of one ML port, and to change the other ML port TS connections from **Both** to **Rx**.